



# THE ASSAM GAZETTE

অসাধাৰণ

EXTRAORDINARY

প্ৰাপ্ত কৰ্তৃত্বৰ দ্বাৰা প্ৰকাশিত

PUBLISHED BY THE AUTHORITY

নং 375 দিশপুৰ, বৃহস্পতিবাৰ, 17 আগষ্ট 2023, 26 শাওণ, 1945 (শক)

No. 375 Dispur, Thursday, 17th August, 2023, 26th Sravana, 1945 (S. E.)

GOVERNMENT OF ASSAM

ORDERS BY THE GOVERNOR

DEPARTMENT OF HOUSING AND URBAN AFFAIRS

## NOTIFICATION

The 24th July, 2023

**eCF No. 340352/2023/131.-** In exercise of the powers conferred by the Sub-Section (2) and (3) of Section 10 of the Assam Town & Country Planning Act, 1959 (as Amended) Read with Rule 6 of the Assam Town and Country Planning (Publication of Master Plan and Zoning Regulation) Rules 1962, the Governor of Assam is pleased to publish the following notice regarding the publication of the Final Master Plan for Doomdoooma.

### NOTICE FOR THE PUBLICATION OF THE FINAL MASTER PLAN FOR DOOMDOOMA

1. It is notified that the Final Master Plan for Doomdoooma is prepared by the Directorate of Town and Country Planning, Government of Assam and adopted by the State Government under Sub Section (2) and (3) of Section 10 of the Assam Town & Country Planning Act, 1959 (as amended) read with Section 6 of the Assam Town & Country Planning (Amendment) Rule, 1962 for the area described in the schedule below, is hereby published.
2. The Final Master Plan with all relevant papers and maps may be inspected free of Cost during the office hours at the office of the Director, Town & Country Planning, Assam, Dispur, Guwahati-6, the Deputy Director, Town & Country Planning, District Office-Dibrugarh, office of the Chairman, Doomdoooma Municipal Board & Doomdoooma & Tinsukia revenue Circle Office. Copies of the Final Master Plan is also available in the office of the Director, Town & Country Planning, Dispur, Guwahati-6 and Deputy Director, Town & Country Planning, District Office-Dibrugarh for sale on payment.

**SCHEDULE**

District	:	Tinsukia
Revenue Circle	:	Doomdooma & Tinsukia
Block	:	Kakopothar & Hapjan
Mouza	:	Doomdooma, Hapjan and Tingrai
Master Plan	:	Doomdooma
Master Plan Area	:	58.59 Sq.km
Urban Area	:	4.30 Sq.km
Rural Area	:	54.29 Sq.Km

**REVENUE AREAS INCLUDED IN DOOMDOOMA MASTER PLAN**

Sl. No.	Name of Town & Village	Mauza	Block	Revenue Circle
1	Doomdooma Municipal Board	Doomdooma		Doomdooma
2	Athengia Gaon	Doomdooma	Kakopothar	Doomdooma
3	Badalbheta T.E.28 W1	Doomdooma	Kakopothar	Doomdooma
4	Badalbheta T.E 79/76 Nlr	Doomdooma	Kakopothar	Doomdooma
5	Bisa Kupi T.E.73 Fs	Doomdooma	Kakopothar	Doomdooma
6	Bisakupi T.E. 72 Fs	Hapjan	Hapjan	Doomdooma
7	Bisakupi Gaon	Hapjan	Hapjan	Doomdooma
8	Daimukhiya Gaon	Hapjan	Hapjan	Doomdooma
9	Daimukhiya T.E. 83 W1	Hapjan	Hapjan	Doomdooma
10	Kalipani Gaon	Doomdooma	Kakopothar	Doomdooma
11	Mankhowa Gaon	Doomdooma	Kakopothar	Doomdooma
12	Ouguri Gaon	Hapjan	Hapjan	Doomdooma
13	Sakreting 40 W1	Doomdooma	Kakopothar	Doomdooma
14	Sakreting T.E. 135 Fs.	Doomdooma	Kakopothar	Doomdooma
15	Doomdooma Pather	Tingrai	Hapjan	Tinsukia
16	Hahsara 8 No. Grant	Tingrai	Hapjan	Tinsukia
17	Hahsara T.E. 79/538 Gr	Tingrai	Hapjan	Tinsukia
18	Hahsara T.E. 20/156 Orr	Tingrai	Hapjan	Tinsukia
19	Bisakupi T.E. 72 W1	Hapjan	Hapjan	Doomdooma
20	Hahsara T.E 59/56 Appl	Tingrai	Hapjan	Tinsukia
21	Bisakupi T.E 8 No. LC	Doomdooma	Kakopothar	Doomdooma
22	Bisakupi 121 FS	Doomdooma	Kakopothar	Doomdooma
23	Bisakupi TE 121 WL	Doomdooma	Kakopothar	Doomdooma
24	Badlabheta TE 17 WL	Doomdooma	Kakopothar	Doomdooma
25	Badlabheta TE 111/114NLR	Doomdooma	Kakopothar	Doomdooma
26	Fatikjan Gaon	Doomdooma	Kakopothar	Doomdooma

27	Hahsara 15/12 NLR	Tingrai	Hapjan	Tinsukia
28	Tara T.E. 123/NLR	Doomdooma	Kakopothar	Doomdooma
29	Sokreting 560 WL	Doomdooma	Kakopothar	Doomdooma

**C. DESCRIPTION OF BOUNDARIES**

North	:	Tipuk 101 FS, 1 No. Rangajan Gaon, Nagaon , Asomiya Balijan
South	:	Raidang TE 122 Fs Grant, Samdang TE 46 Appl, Raidang TE 132 Fs.
East	:	Bordubi TE 207/205 Nlr, Bordubi TE 4/544 W1, Badlabheta TE No. 559 W1
West	:	Dalmukhia TE No. 84, Rupai TE 38/32, Dalmukhiya TE 12 W1, Daidam TE 135/138 W1.

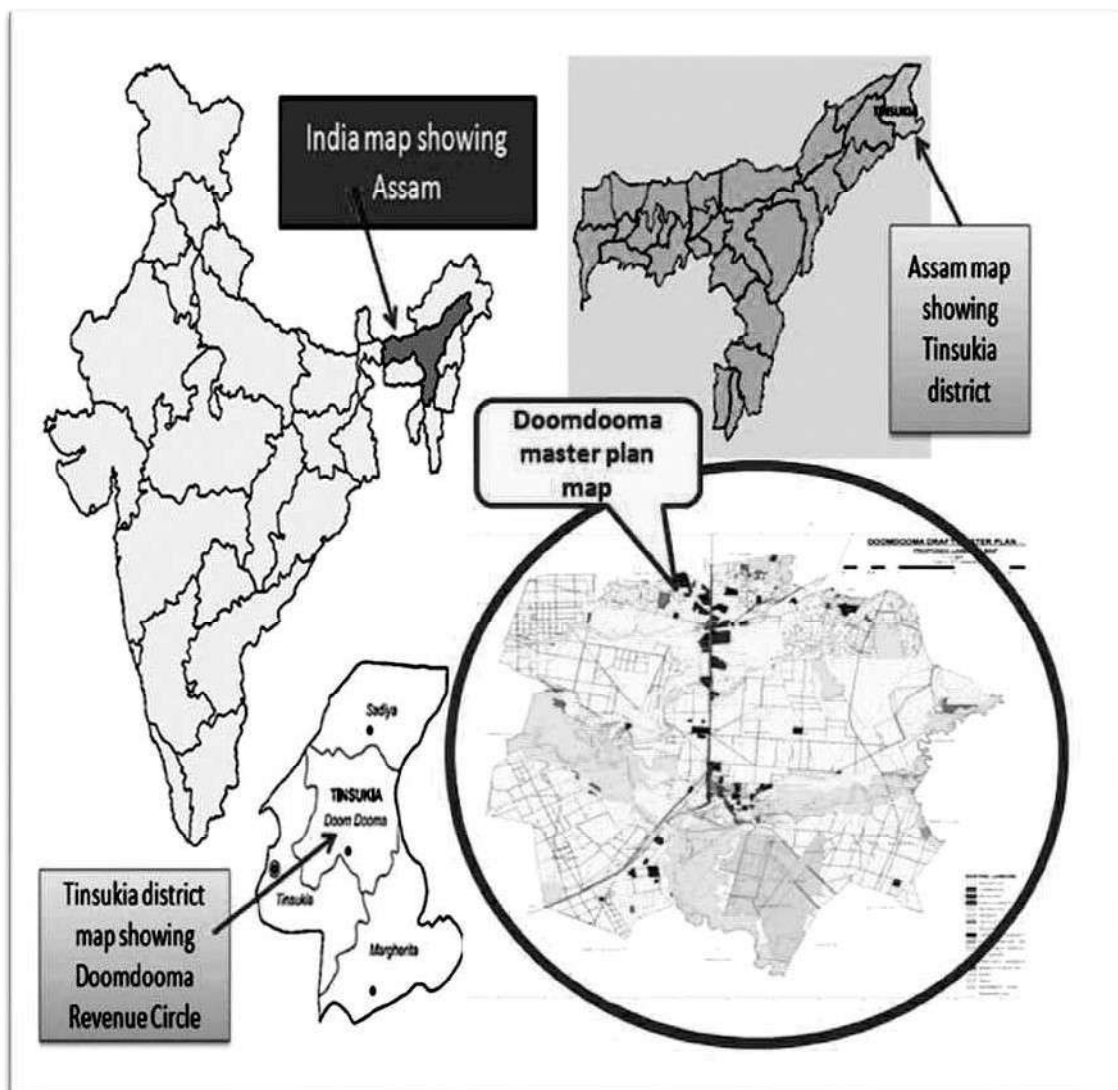
**KAVITHA PADMANABHAN,**  
 Commissioner & Secretary to the Government of Assam,  
 Department of Housing and Urban Affairs,  
 Dispur, Guwahati-6

## **CHAPTER - 1**

### **1. INTRODUCTION TO MASTER PLAN AREA**

#### **1.1 Location**

Doomdooma is tea-based industrial town of Assam. It is situated 512.3 km. towards north-east from state capital Dispur by road and 74.9 km. from nearest important town Dibrugarh and 25.1 Km from district head quarter Tinsukia. The town and its surrounding villages itself have a natural scenic beauty with the tea gardens and the place of habitants of the various ethnic tribes and linguistic people with their own cultural heritage. The geographical location of Doomdooma town is 27.57° North latitude and 95.57° East longitude and has an average elevation of 114 meters. The Assam Trunk Road NH-15 (new) passes through Doomdooma. The Doomdooma river divides the town in two parts.





## 1.2 Regional Setting

Doomdoooma master plan region falls in the north-eastern part of India in the upper Assam valleys. The whole master plan area is a flat level plain in the Doomdoooma, Hapjan and Tingrai Mouzas. The general physical feature of the master plan area is both varied and picturesque in nature. The soil is composed of loose sandy texture with occasional sands and gravels. The phosphoric content is found in the soil which is good for tea cultivation. Acidic alluvial soils are suitable for tea cultivation. Like the rest of Assam, Doomdoooma master plan region is also a seismic area and is liable to earthquake. The great earthquake of 1897 was felt all over the region. It damaged many houses and buildings of the people as well as of the Govt. Again, the earthquake of August 15, 1950 has also damaged houses buildings and roads. The after effect of the earthquake brought a vast change to the topography of the region. The surrounding areas of Doomdoooma are mainly covered by tea gardens.



### 1.3 Brief History of the town

Doomdooma has been ruled by many kings of dynasties across Assam and the most significant ones were the Ahom dynasty, the Kachari dynasty and the Moran dynasty before the impact of the British in Assam. But, Doomdooma was an unseen and underdeveloped region for many decades, mostly covered with forests. The dense forest of the place gave a very safe habitat to elephants and hence the area is known after elephants. The name Doomdooma is derived from the sound of the footfalls of elephants which sounded much like 'dumdum'.



*Old Historical map showing Doomdooma*

When British ruled the region, they had noticed the region as an excellent place for the cultivation of tea and cleared the forests and set up tea farms which gave the place a new identity and made it known among people as the "tea-town". In Doomdooma revenue circle, out of 430 villages there are 142 tea estates which is the highest in any revenue circle of Assam.



Bisakupi Tea Estate



Hahsara Tea Estate

Doomdooma town was originally a part of Lakhimpur district and thereafter it was a part of Dibrugarh district. When Tinsukia formed a separate district in 1989, Doomdooma was created a revenue circle of Tinsukia district. Present Doomdooma Municipal Board is the oldest of the five Town Committees of the undivided Lakhimpur district. It was started as a Union Committee in 1916 and was upgraded to the status of a town committee in 1925 under the Assam Municipal Act of 1923 with 4 wards. According to the 1961 Census the town comprised an area of about 2.59 Sq.Km. and had a population of 8192 persons of which 5319 were males and 2873 females. In 1971 Census the population increase to 10510 persons of which 6190 were males and 4320 were females. The density of population was 4058 persons per Sq. Km. Later on, existing 4 wards increased to 10 wards. As per Govt. Notification in 2018, Doomdooma town committee was converted to Doomdooma municipal board and present municipal board area is 4.30 sq.km.



*Doomdooma Municipal Board*

#### **1.4 Climate**

The climate of Doomdooma is characterized by the absence of a dry hot summer season, the highest temperature being experienced during the monsoon season along with abundant rains and highly humid atmosphere throughout the year. Winter starts from December and end in February which is followed by a season of thunder storms from March to May. From June to the beginning of October is the season of south-west monsoon and October and November are marked as post monsoon season. The annual rainfall varies marginally from one to other. The cold season starts towards the end of November when both day and night temperatures begin to decline December and January are the coldest month of the year. With the mean daily maximum temperature at about 24° C and the mean daily minimum at 9° C to 11° C. Temperature begins to rise from the beginning of March. The rise in temperature continues up to September. The highest mean daily temperature experienced in July and August when the mean

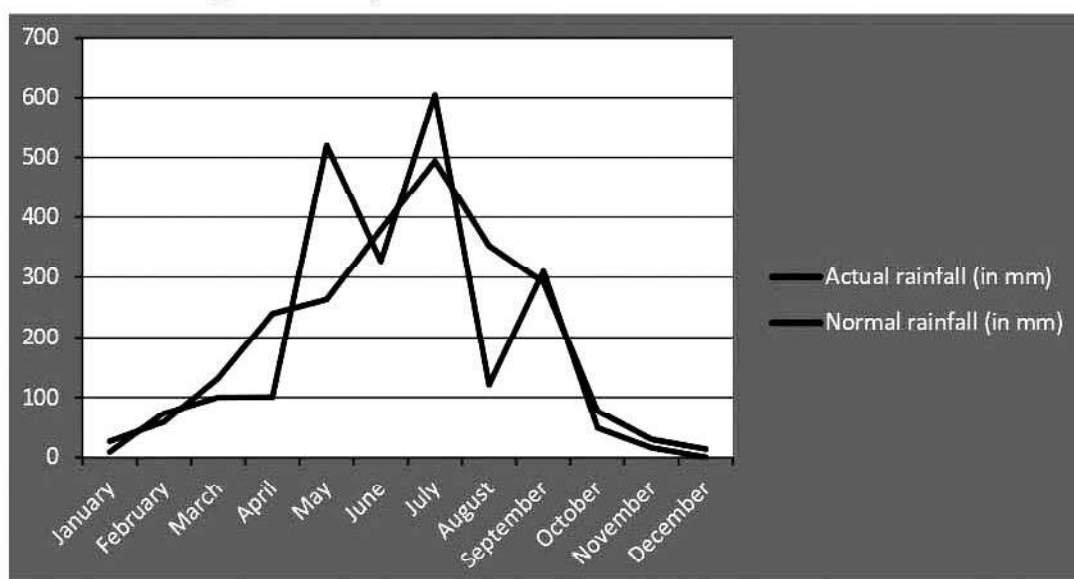
daily maximum temperature goes up to maximum of 34° C and the mean daily minimum temperature varies between 20° C to 25° C. With the termination of the monsoon season the weather become gradually pleasant and cool. The air remains highly humid throughout the year except during the period of February to march when the relative humidity is comparatively less particularly in the afternoon. Winds are light throughout the year except the short spells of strong winds during thunder storms in the period from March to May.

**TABLE No.-1**  
**Average monthly rainfall data in Doomdooma in 2019**

Month	Actual rainfall (in mm)	Normal rainfall (in mm)
January	8.8	26.6
February	73.5	58.4
March	100.3	131.2
April	100.5	239.3
May	520.4	262.6
June	327.2	379.3
July	604.8	493.9
August	120.6	352.7
September	309.8	291
October	48.8	76.9
November	16.2	29.3
December	0.2	13.7
<b>Average Annual rainfall</b>	<b>2231.1</b>	<b>2354.9</b>

Source: - Statistical Hand Book Assam 2020

**Figure No.-1**  
**Average monthly rainfall data of Doomdooma in 2019**



### 1.5 Topography

Topography is the study of the shape and features of the surface of the earth. The topography of an area could refer to the surface shapes and features themselves, or a description in maps. In modern usage topography involves generation of elevation data in digital form. It is often considered to include the graphic representation of the landform on a map by a technique, including contour lines, hypsometric tints and relief shading.

Below is the elevation map of Doomdooma, which display range of elevation with different colours. The map also provides idea of topography and contour of Doomdooma.



***Topographical map of Doomdooma***

### 1.6 Soil Condition

Physiographically the area is characterized by Doomdooma river plains in the southern part with gentle slope towards south-east. The soil in the area may be grouped in to three broad categories depending upon the origin and occurrence. These are given below-

- a. Newer alluvial soil – Flood plain areas of river Doomdooma and the tributaries in the northern part are characterized by light gray clay with sand and silt.
- b. Older alluvial soil - It occurs mainly in the central part with limonite yellow to reddish yellow clay.

Tertiary group of sedimentary rocks are confined to the southernmost part of Doomdooma where ground water occurs in the shallow weathered zone and this may be developed through large diameter open wells. Alluvial plain covers major part of the area. Ground water occurs in regionally extensive aquifers down to explored depth with a very good yield prospect. The aquifers are consisting of sand of various grades and are suitable for both shallow and deep tube wells. Doomdooma region



is covered by alluvial deposits of recent and sub-recent origin. In many places of the area, there are terrace deposits.

### 1.7 Settlement Pattern

Doomdooma experienced the settlement of traders, construction workers, plantation workers, commercial establishment employee's, tea-based and other industrial worker's, service-oriented workers and Govt. employees since the early days. In Doomdooma revenue circle more than 140 tea gardens and in master plan area there are 20 tea gardens which support a huge number of labourers and their families and the members of supervisory and managerial staff. In the town area settlement pattern mainly exhibits by the Hindi, Bengali and Assamese speaking population. Plantation labour worker and indigenous people settlement is mainly found in the rural areas.

### 1.8 Rural-Urban-Scenario

Doomdooma master plan covers an area of 58.59 sq.km. Out of this urban area consists of 4.30 sq.km. and 54.29 sq.km. occupy by rural area. As per 2011 census urban area population is 21572 persons and rural area population is 40528 persons. So, in Doomdooma master plan area (DMPA), urban population consists of 34.74% and rural area population consists of 65.26%. Since originally Doomdooma developed as a tea-based town and there are so many tea-gardens in the periphery of the town and the population working as tea workers and in tea factories and therefore the percentage of rural population is higher in comparison to urban population in the master plan area.

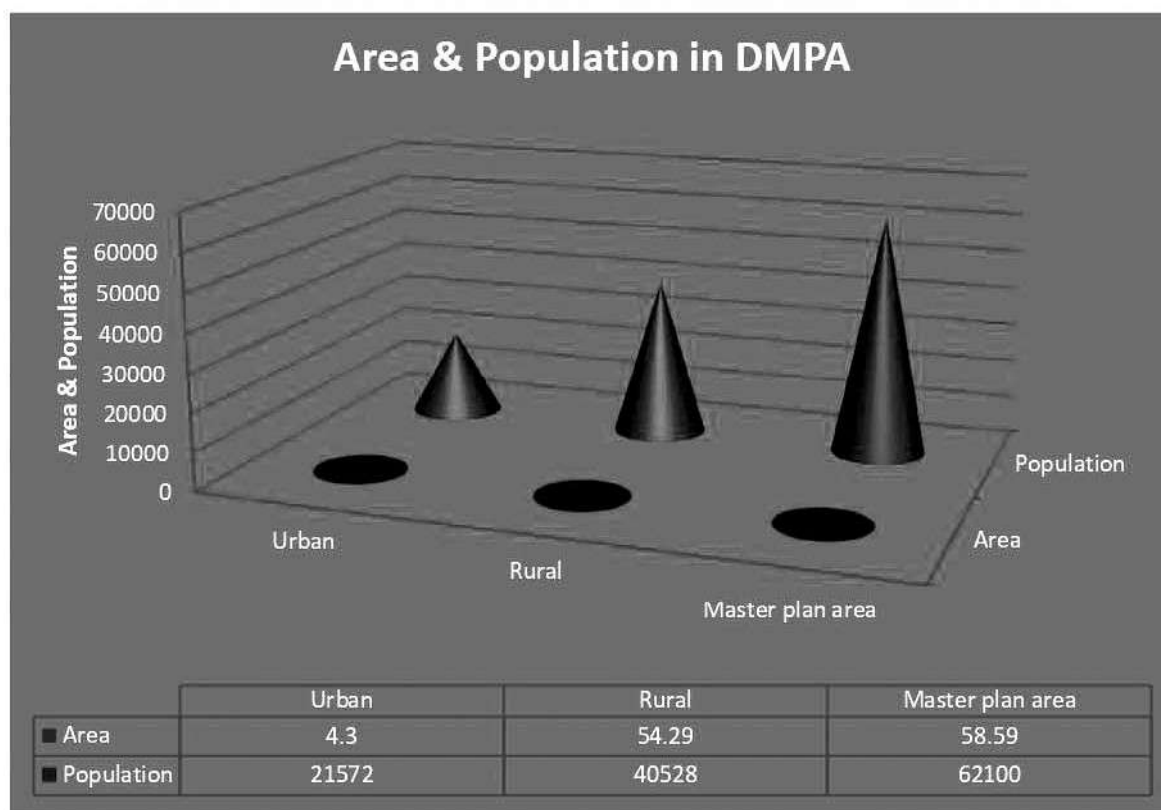
**TABLE NO: - 2**

**Urban & Rural Area Population Figure in Master Plan Area**

Name of the Master plan area	Category of area	Area in sq.km	Population in 2011
Doomdooma master plan	Urban	4.30	21572
	Rural	54.29	40528
Total		58.59	62100

Source:- Census of India 2011

**FIGURE NO. -2**  
**Urban & Rural Area Population Figure in Master Plan Area**



### 1.9 Physical Growth and Expansion of the town

Physical growth and expansion of Doomdooma town has been mainly taken place due to the commercial establishment, tea-based industries, Hindustan Unilever Limited. Further, expansion of the town also takes place due to the Defence point of view such as Doomdooma Aviation Research Centre, Indo-Tibetan Border Police, Border Roads Organisation.

For planning purpose Doomdooma master plan area has been divided into the following zones: -

**A. The Urban zone comprises the following areas:**

1. 10 (ten) wards under Doomdooma Municipal Board.

**B. The rural zone comprises the following villages and tea gardens.**

1. 8 Villages.
2. 20 Tea Gardens.

**TABLE NO-3**  
***Detailed area of Doomdooa Master Plan***

<b>Sl. No.</b>	<b>Name of Area</b>	<b>Area in Sq. km.</b>
1	Doomdooa MB area	4.30
2	Athengia Gaon	3.40
3	Badalbheta T.E. 28 Wl	0.04
4	Badalbheta T.E. 79/76 Nlr	2.62
5	Bisa Kupi T.E. 73 Fs	3.52
6	Bisakupi T.E. 72 Fs	2.06
7	Bisakupigaon	3.13
8	Daimukhiyagaon	1.91
9	Daimukhiya T.E. 83 Wl	2.97
10	Kaliapanigaon	0.53
11	Manuh khowagaon	1.9
12	Ougurigaon	1.63
13	Sakreting 40 Wl	0.30
14	Sakreting T.E. 135 Fs	4.48
15	Doomdooa Pather	0.81
16	Hahsara 8 No. Grant	1.63
17	Hahsara T.E 79/538 Gr	0.99
18	Hahsara T.E 20/156 Orr	2.00
19	Bisakupi T.E. 72 Wl	1.30
20	Hahsara T.E. 59/56 Appl	2.33
21	Bisakupi TE 8 No. LAC	1.62
22	Bisakupi 121 FS	3.19
23	Bisakupi TE 121 WL	0.16
24	Badlabheta TE 17 WL	0.29
25	Badlabheta TE 111/114 NLR	2.18
26	Fatikjan Gaon	3.69
27	Hahsara 15/12 NLR	1.48
28	Tara T.E. 123 NLR	2.84
29	Sokreting 560 WL	1.29
<b>TOTAL</b>		<b>58.59 Sq. Km.</b>

*Source: Area as per GIS calculation*

### **1.10 Need of the Master plan**

The concept of planning has evolved gradually through the changing demand of man and environment but has assumed greater significance and wider connotation with the inception of the present century. The rapid pace of industrial expansion and urbanization has hastened the growth of urban

centres. The forces operating behind urban expansion in recent years is becoming more and more difficult to direct or to control. To check the unplanned and haphazard growth of the towns, the principles of planning has been accepted as urgent an imperative.

A town is composed of land, building, people, utilities, services and transportation. It is a large configuration of more or less permanent settlers engaged in diverse economic activities. As the town grows, it attracts larger population; it enlarges the scope of their activities, while the complexity of living distorts the well-organized concept of the urban space organization.

Master plan is a statutory instrument for the provision of long-range vision for the built environment of a community. It guides the appropriate use of lands within a town and its adjacent areas in order to protect the public health and safety and to promote general welfare. Among other issues, the master plan can identify suitable locations for commercial, housing and mixed-use development; locations where the city/town should increase density, use redevelopment or intervene otherwise; opportunities to extend or improve open space, recreational areas and civic facilities; strategies for increasing economic development; environmental, historic strategies for solving congestion, improving transit services and also enhance the aesthetic beauty of the town. As a result, the master plan has a direct relationship to its citizens, whether we live, work or own a business.

The evils of unplanned growth of our towns have caused enormous problems such as shortage of living accommodation, traffic congestion, lack of sanitation and other community facilities and amenities. The growth of population and the potentiality of Doomdooma to be an industrially and commercially vibrant town in the near future had led the state Government to realize the importance of proper planned growth of the town and the preparation of the master plan for this purpose.

In order to translate the suggested developments for Doomdooma into action, it would be necessary to follow this master plan which is designed to regulate the future growth and to affect a uniform community. In preparing the master plan for Doomdooma, various surveys such as land-use, socio-economic etc. were carried out to understand the existing scenario of the town and to suggest the line of actions to be adapted.

It is highly desirable at this point that the citizens of Doomdooma should clearly understand the need for the master plan because a master plan is the city/town's long range plan and is important as it affects things we do every day and how we will do then in the future master plan guide city/towns decisions about important issues like what economic development strategy the city town should take; where certain types of business should the town try to attract; how

much parking should be provided in neighbourhood; what improvements should be made to parks and recreations centres; How to protect our natural resources; why certain areas are designed as historic places. So, when we wonder why a building is allowed to be located somewhere, why certain streets are one way streets, why a park has been built in our neighbourhood; a good place to start looking is the master plan. As such the most desired results could be positive civic interest and greater confidence which will create a conducive environment and our descendants will profit by our forethought or suffer from our negligence. What better work can we achieve than make their path easier, their homes more intimate, their public buildings more attractive and accommodating.



**CHAPTER -2****2. DEMOGRAPHY****2.1 Total Population**

Demography is the study of human population such as size, growth, density, distribution and vital statistics. It helps to understand population dynamics by investigating three main demographic processes in Doomdoooma. It is essential that a good understanding of a population dynamics provide the basic for decision making, policy development and planning social and economic development processes and outcomes are depends upon the detailed study of population characterized of any planning area.

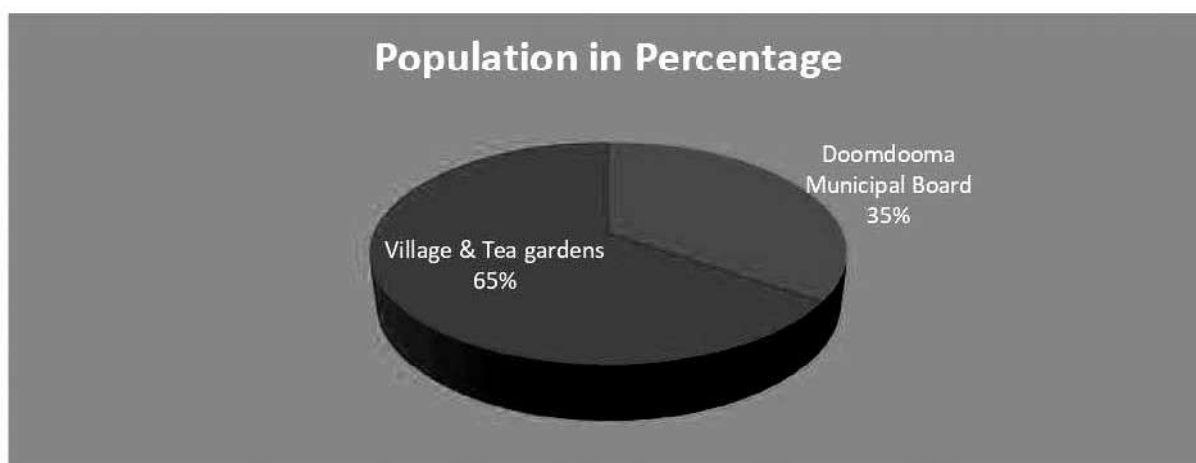
According to census of India 2011, the total population of Doomdoooma master plan area is 62100 persons, out of which 21572 persons live within Doomdoooma municipal board, 40528 persons live in rural areas of the town. The following table shows the population distribution within Doomdoooma master pan area.

**TABLE NO. 4**  
**Population of Doomdoooma Master Plan area in 2011**

Sl.No	Area	Population (2011)	Percentage (%)
1	Doomdoooma municipal board	21572	34.74 %
2	28 villages & tea gardens	40528	65.26 %
	<b>Master Plan Area</b>	<b>62100</b>	<b>100 %</b>

(Source: Census of India 2011)

**FIGURE NO. 3**  
**Population Distribution of Doomdoooma Master Plan Area in 2011**

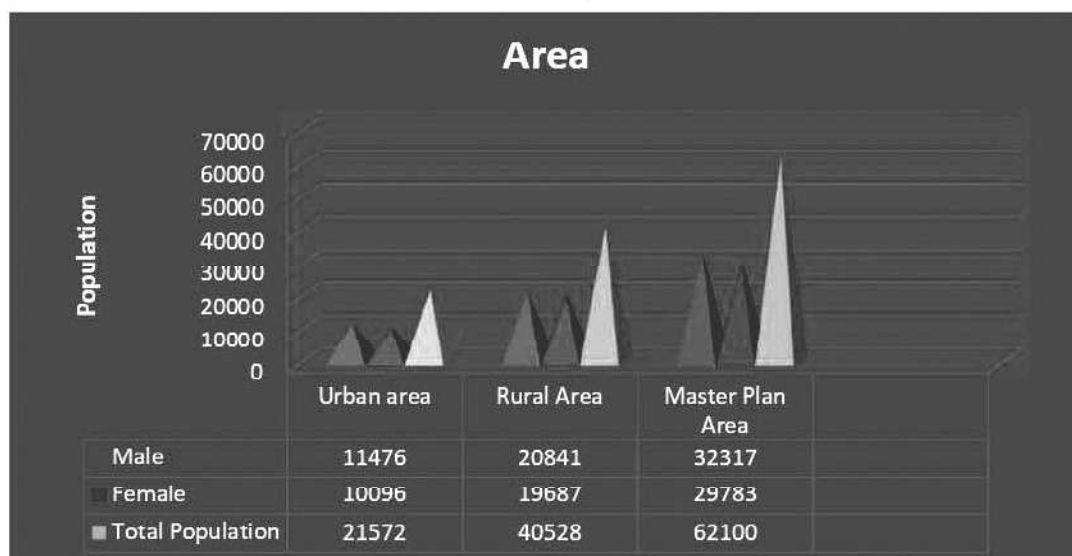


**TABLE NO. 5**  
**Detail population distribution of Doomdooma Master Plan area in 2011.**

Name	Population		
	Male	Female	Total
Ward No. 1	2968	2487	5455
Ward No. 2	550	502	1052
Ward No. 3	709	601	1310
Ward No. 4	542	458	1000
Ward No. 5	639	583	1222
Ward No. 6	609	526	1135
Ward No. 7	955	875	1830
Ward No. 8	1418	1287	2705
Ward No. 9	1323	1219	2544
Ward No. 10	1761	1558	3319
<b>(A) Doomdooma Municipal Board area</b>	<b>11476</b>	<b>10096</b>	<b>21572</b>
Athengia Gaon	598	574	1172
Badalbheta T.E. 28 Wl	160	161	321
Badalbheta T.E. 79/76 Nlr	293	321	614
Bisa Kupi T.E. 73 Fs	572	582	1154
Bisakupi T.E. 72 Fs	745	735	1480
Bisakupigaon	1167	1201	2368
Daimukhiyagaon	1054	992	2046
Daimukhiya T.E. 83 Wl	745	735	1480
Kaliapanigaon	61	61	122
Manuh khowagaon	1727	1630	3357
Ougurigaon	1744	1706	3450
Sakreting 40 Wl	179	189	368
Sakreting T.E. 135 Fs	189	172	361
Doomdooma Pather	1131	997	2128
Hahsara 8 No. Grant	1438	1435	2873
Hahsara T.E 79/538 Gr	827	882	1709
Hahsara T.E 20/156 Orr	235	232	467
Bisakupi T.E. 72 Wl	425	497	922
Hahsara T.E. 59/56 Appl	604	606	1210
Bisakupi TE 8 No. LAC	3109	2253	5362
Bisakupi 121 FS	739	693	1432
Bisakupi TE 121 WL	Uninhabited	Uninhabited	Uninhabited
Badlabheta TE 17 WL	Uninhabited	Uninhabited	Uninhabited
Badlabheta TE 111/114 NLR	341	361	702
Fatikjan Gaon	1825	1757	3582
Hahsara 15/12 NLR	684	665	1349
Tara T.E. 123 NLR	159	186	345
Sokreting 560 WL	90	64	154
<b>(B) Rural area population</b>	<b>20841</b>	<b>19687</b>	<b>40528</b>
<b>(A) + (B) Total Master Plan area</b>	<b>32317</b>	<b>29783</b>	<b>62100</b>

*(Source: Census of India, Assam 2011)*

**FIGURE NO.4**  
**Male & Female population distribution of**  
**Doomdooma Master Plan Area in 2011**

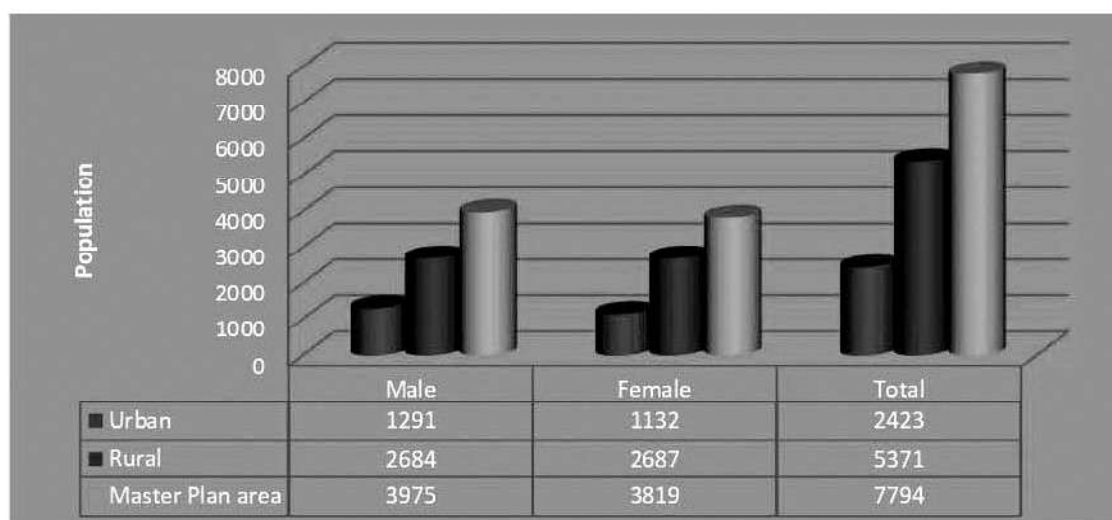


**TABLE NO. 6**  
**Population distribution of 0 - 6 years age group of**  
**Doomdooma Master Plan area in 2011.**

Name	Population		
	Male	Female	Total
Urban area	1291	1132	2423
Rural area	2684	2687	5371
<b>TOTAL MASTER PLAN AREA</b>	<b>3975</b>	<b>3819</b>	<b>7794</b>

Source: - Census of India 2011

**FIGURE NO. 5**  
**Population distribution of 0 – 6 years age group of**  
**Doomdooma Master Plan area in 2011**



### 2.1.1 Population Growth Rate

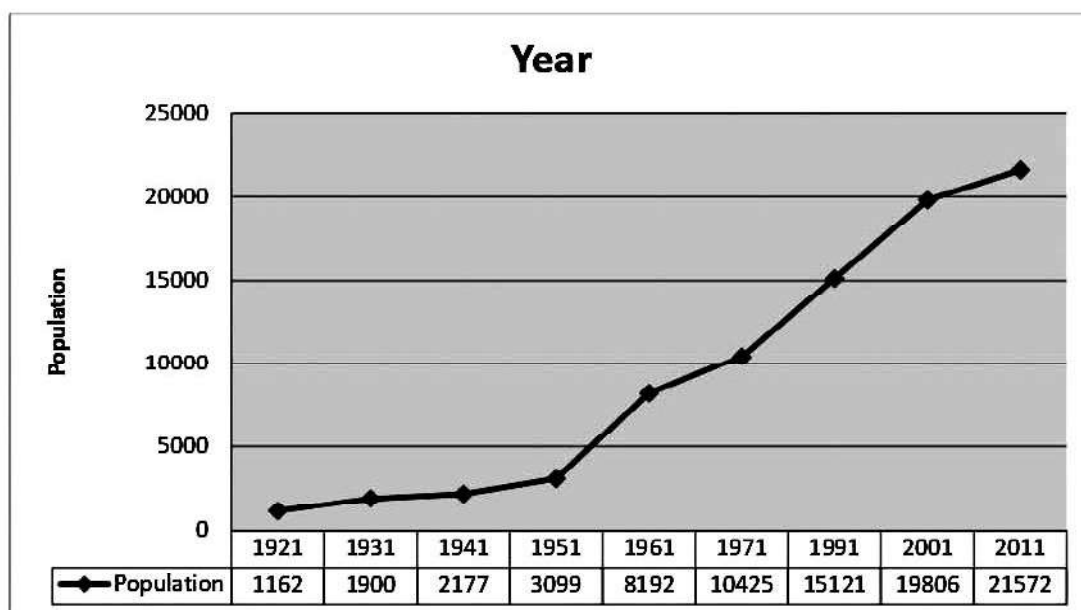
The purpose to provide facilities and services in community is to meet the physical, economic and social needs of the people. It is a study and understanding of the growth, distribution, composition and other characteristics of the population and trend are therefore the basic requirement for the wider range planning programmers. The objective of the master plan for Doomdooa is to cater to the various needs emerging from these studies in order to meet the aspirations of its residents for whom the plan is prepared.

**Table No. 7**  
**Growth of population in Doomdooa Municipal area**

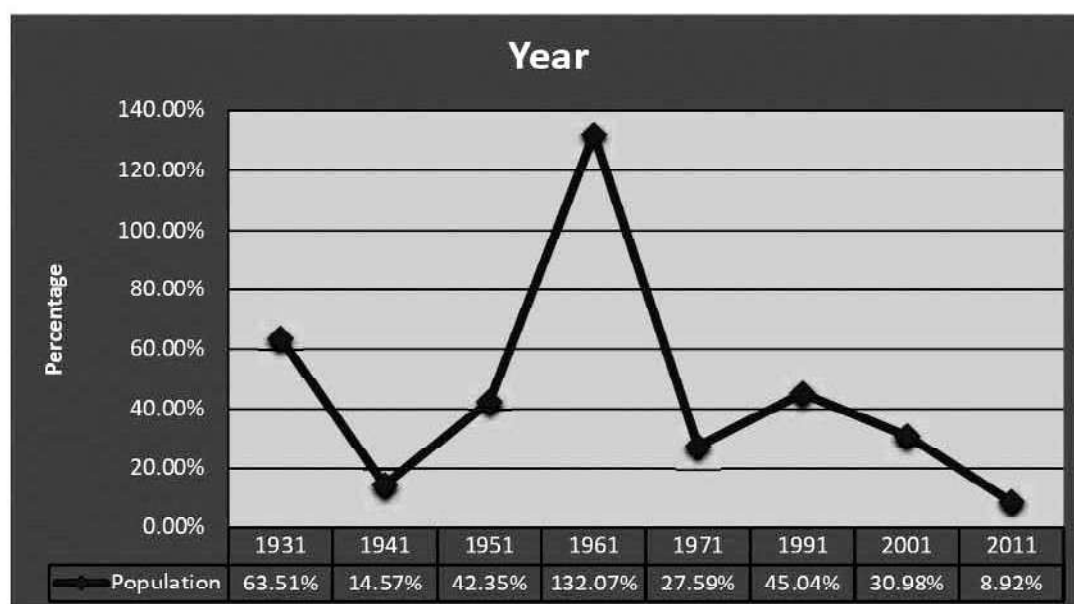
Year	Population	Decadal Growth Rate
1921	1162	-
1931	1900	63.51 %
1941	2177	14.57 %
1951	3099	42.35 %
1961	8192	132.07 %
1971	10425	27.59 %
1981	No census in Assam	No census in Assam
1991	15121	45.04 % (for 2 decades)
2001	19806	30.98 %
2011	21572	8.92 %

Source: - Census of India 2011

**Figure No.-6**  
**Decadal growth of population in Doomdooma Municipal area**  
**1921 to 2011**



**Figure No.-7**  
**Decadal growth of population (in %) in Doomdooma Municipal area**



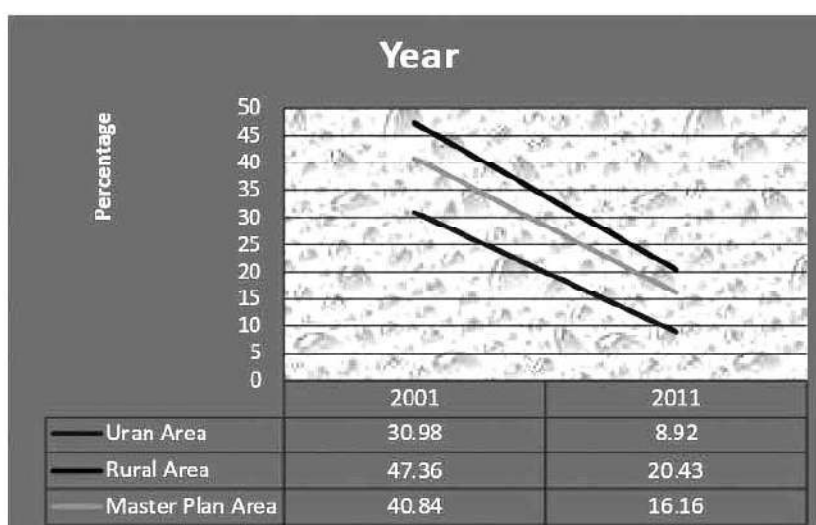
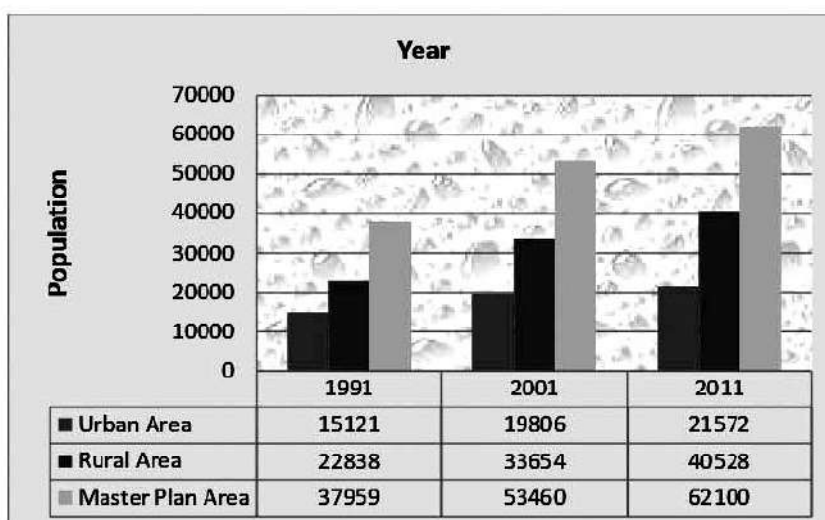


**Table No. 8**  
**Growth of population in Doomdooma Master Plan**

Year	Urban Area			Rural Area			Master plan Area		
	Population	Decadal increase of population	Decadal Growth (%)	Population	Decadal increase of population	Decadal Growth (%)	Population	Decadal increase of population	Decadal Growth (%)
1991	15121			22838			37959		
2001	19806	4685	30.98 %	33654	10816	47.36 %	53460	15501	40.84 %
2011	21572	1766	8.92 %	40528	6874	20.43%	62100	8640	16.16 %

Source: - Census of India 2011

**FIGURE NO.-8**  
**Growth of population in Doomdooma Master Plan**



**TABLE NO. 9**  
**Population growth rate of Assam and Doomdooma Master Plan Area:**  
**1991 – 2011**

Area	Population			Growth Rate in %	
	1991	2001	2011	1991-2001	2001-2011
Assam State					
<b>Total</b>	22.49	26.66	31.17	18.54 %	16.93 %
<b>Urban</b>	2.19	3.11	4.39	38.21 %	27.61 %
<b>Rural</b>	19.93	23.22	26.78	16.51 %	15.35 %
<b>* Population in Millions</b>					
Doomdooma Master Plan					
<b>Total</b>	37.96	53.46	62.10	40.84 %	16.16 %
<b>Urban</b>	15.12	19.81	21.57	30.98 %	8.92 %
<b>Rural</b>	22.84	33.65	40.52	47.36 %	20.43 %
<b>* Population in Thousand</b>					

Source: - Census of India 2011

### 2.1.2 Population Density

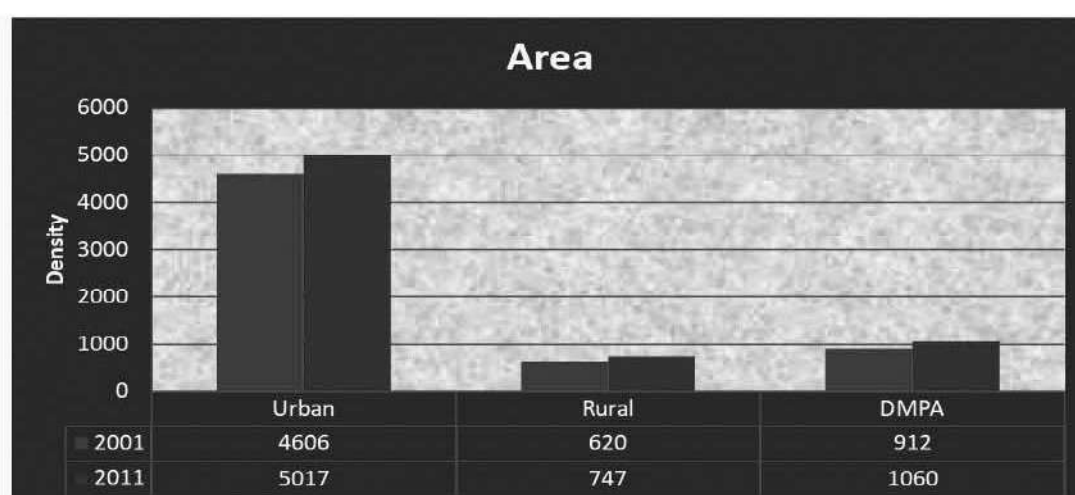
The net density of population in Doomdooma municipal board area in 2011 is 5017 persons per sq.km. In rural area of master plan the density is 747 persons per sq.km. If we consider the master plan as a whole the density of population in 2011 is 1060 person per sq. km. in Doomdooma master plan area.

**TABLE NO-10**  
**Comparison of population density in 2001 and 2011**

Year	Urban area	Rural area	Master plan area
2001	4606	620	912
2011	5017	747	1060

Source: - Census of India 2001 & 2011

**FIGURE NO-9**  
**Comparison of population density in 2001 and 2011**



## 2.2 Sex Ratio

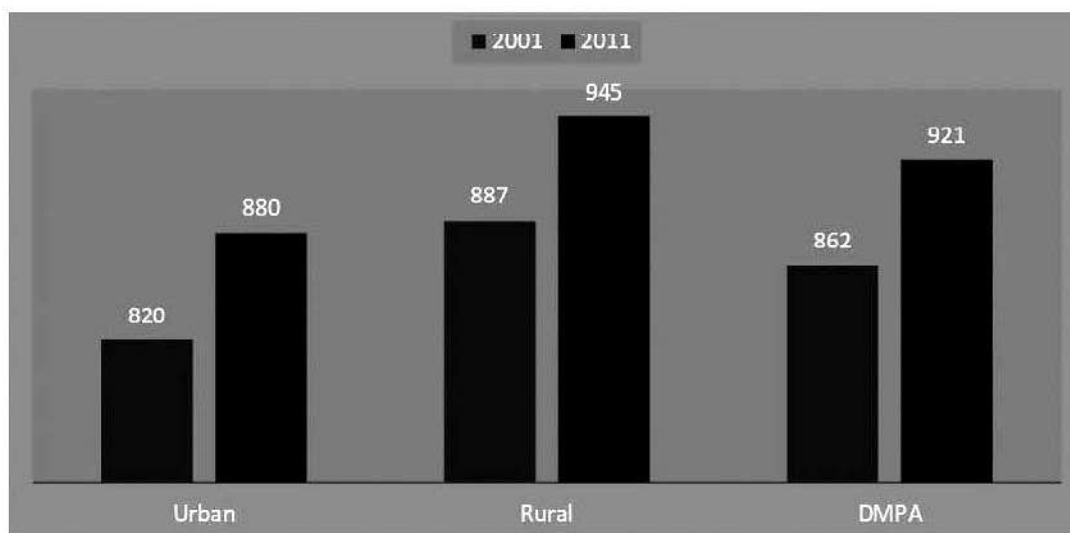
As per 2001 census the sex ratio in urban area of Doomdooma master plan was 820 which is increase to 880 in 2011 census. In rural area sex ratio increased from 887 in 2001 to 945 in 2011. In Doomdooma master plan area as a whole the sex ratio increases from 862 in 2001 to 921 in 2011. It has been noticed that the sex ratio in rural area as compared to urban area of master plan is higher both in the year 2001 and 2011. It is due to the fact that Doomdooma master plan area is mainly a tea garden-based area and pre-dominance of female worker has been seen in tea gardens. Sex ratio of Doomdooma master plan has been shown in the following table.

**TABLE NO. 11**  
**Comparison of Sex Ratio in 2001 & 2011**  
**in Doomdooma Master Plan area**

Year	Area	Male	Female	Sex-ratio
2001	Urban	10881	8925	820
	Rural	17828	15826	887
	Master Plan Area	28709	24751	862
2011	Urban	11476	10096	880
	Rural	20841	19687	945
	Master Plan Area	32317	29783	921

Source: - Census of India 2011

**FIGURE NO-10**  
**Comparison of Sex Ratio in 2001 & 2011**  
**in Doomdooma Master Plan area**



### 2.3 Literacy

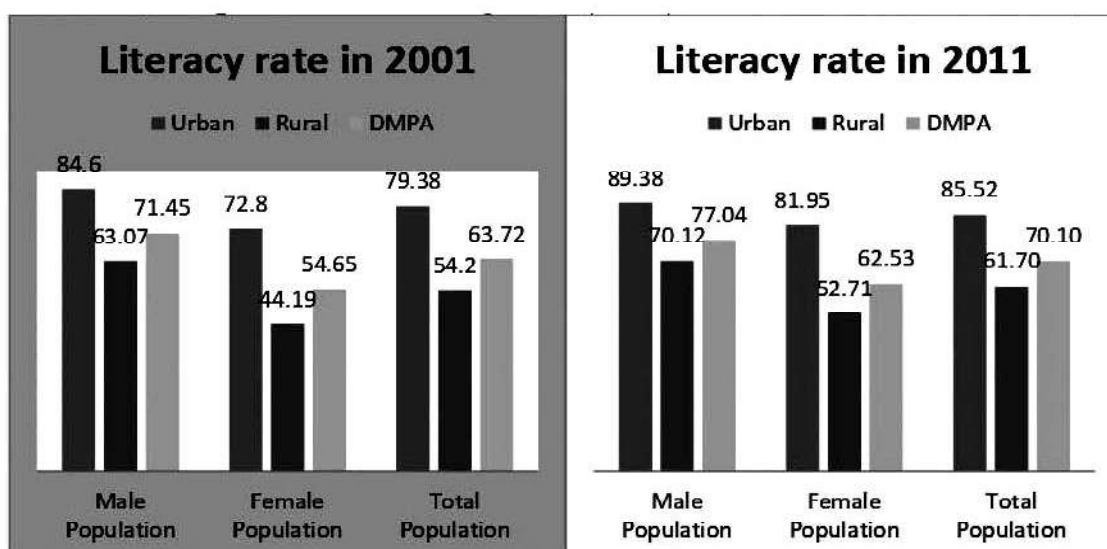
The literacy rate of Doomdooma urban area as per census of India report, 2011 is 85.52% which is just below state urban literacy rate of 88.88%. In the master plan area, the literacy rate in 2011 is 70.10%. The comparison of literacy rate in 2001 and 2011 for Doomdooma master plan area is given below: -

**TABLE NO. -12**  
**Comparison of literacy rate of DMPA in 2001 & 2011**

LITERACY RATE OF DMPA - 2001												
Area	Total Male pop	Total Male pop Exclud ing 0-6 age	Actual Male Lit pop	% Male Lit	Total Female pop	Total Femal e pop Exclud ing 0-6 age	Actual Female Lit pop	% Female Lit	Total Pop	Total pop Exclud ing 0-6 age	Total Actual Lit Pop	% Of Total Lit
Urban	10881	9565	8093	84.60%	8925	7654	5575	72.8%	19806	17219	13668	79.38%
Rural	17829	15022	9474	63.07%	15825	13313	5883	44.19%	33654	28335	15357	51.20%
DMPA	28710	24587	17567	71.45%	24750	20967	11458	54.65%	53460	45554	29025	63.72%
LITERACY RATE OF DMPA - 2011												
Urban	11476	10185	9103	89.38%	10096	8964	7274	81.95%	21572	19149	16377	85.52%
Rural	20841	18157	12731	70.12%	19687	17000	8960	52.71%	40528	35157	21691	61.70%
DMPA	32317	28342	21834	77.04%	29783	25964	16234	62.53%	62100	54306	38068	70.10%

Source: - Census of India 2001 & 2011

**FIGURE: -11**  
**Comparison of literacy rate (in %) of DMPA in 2001 & 2011**



## 2.4 Working and Non-Working Population

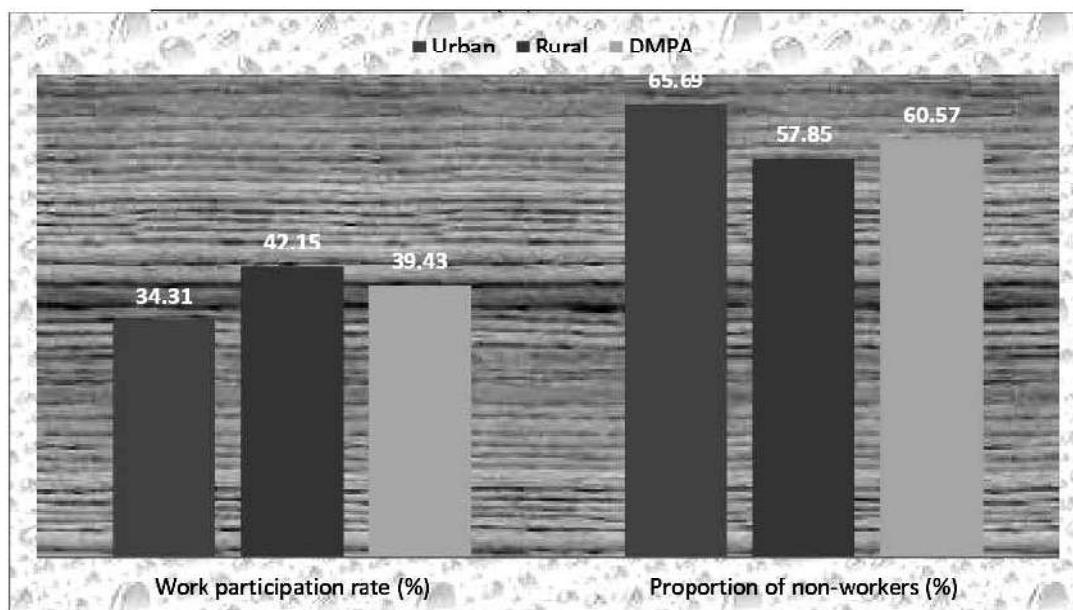
Out of total population of 62100 persons in Doomdooma master plan area the working population is 24486 persons equivalent to 39.43% which is slightly higher than the national average of 38%. The balance non-working population is 37614 i.e., 60.57% mainly consist of women group and unemployed section of the population who are seeking employment in white collard jobs as well as investment opportunities in business.

**TABLE NO.-13**  
**Workers And Non-Workers In Doomdooma Master Plan area**

Category	Urban Area			Rural Area			Total (Master Plan Area)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Main Workers	5538	692	6230	8846	3823	12669	14384	4515	18899
Marginal Workers	881	291	1172	2408	2007	4415	3289	2298	5587
Total Workers	6419	983	7402	11254	5830	17084	17673	6813	24486
Non-workers	5057	9113	14170	9655	13789	23548	14712	22902	37614
Work participation rate (%)	55.93	9.74	34.31	54	29.61	42.15	54.69	22.88	39.43
Proportion of non-workers (%)	44.07	90.26	65.69	46	70.39	57.85	45.31	77.12	60.57

Source: - Census of India 2011

**FIGURE NO. -12**  
**Workers and Non-Workers (%) in Doomdooma Master Plan area**





**2.5 SC-ST Population**

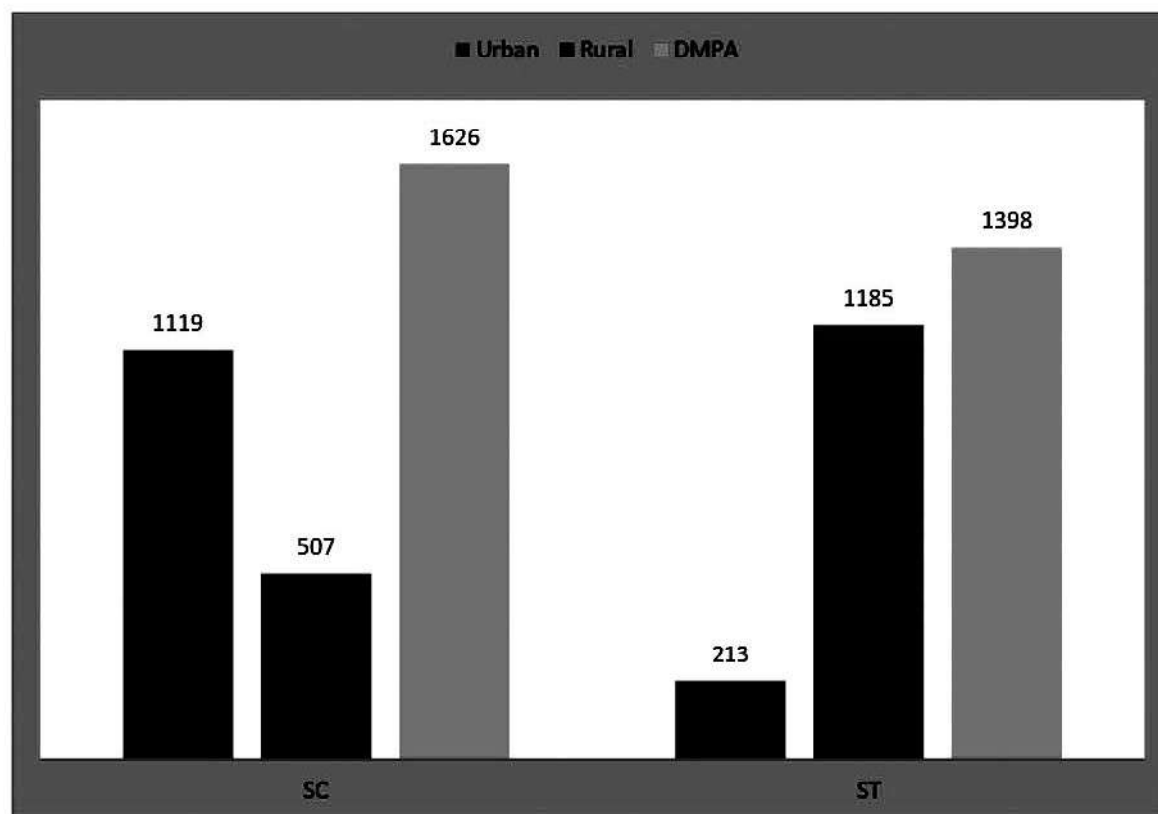
The details of SC and ST population for the Doomdooma master plan area (DMPA) have been shown in the following table.

**TABLE NO. - 14**  
**SC and ST population of DMPA in 2011**

Caste	Urban	Rural	DMPA
SC	1119	507	1626
ST	213	1185	1398

Source: - Census of India 2011

**FIGURE: -13**  
**SC and ST population of DMPA in 2011**



## 2.6 Migration Population

The robust local economy once attracted scores of people from other parts of the country to settle here in search of jobs and business opportunities. In addition to Assamese and various indigenous ethnic groups, the town is home to hundreds of people who migrated from undivided Bengal, Bihar, Uttar-Pradesh for business purposes. Apart from these a large section of tea-garden workers from Orissa and Jharkhand migrated to this region since long back to work as a labourer in the tea gardens.

## 2.7 Residential Density and Size

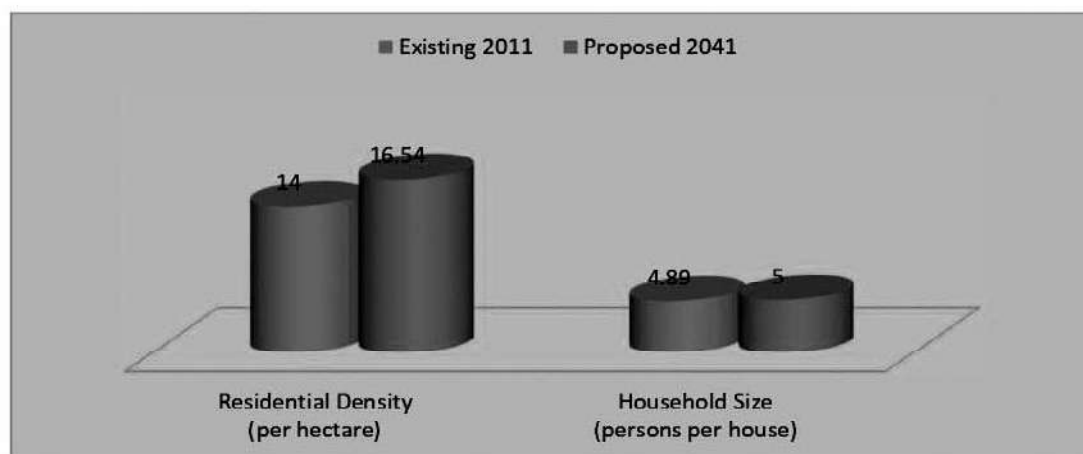
There are about 12699 residential houses in the year 2011 in Doomdooma master plan area. The total population of planning area is 62100 persons, as such, household size is 4.89 persons. Since in Doomdooma master plan the existing land used for residential purposes is 892 hectares, as such existing residential density is 14 dwelling units per hectare. As per projection, gross housing requirement in the planning area is 22199 in 2041 and proposed land uses for residential purpose is 1342 hectares, as such the residential density in the year 2041 will be 16.54 dwelling units per hectare. The household size in 2041 will be 5 persons per house.

**TABLE No-15**  
**Existing and proposed Residential Density**  
**and Household size comparison in 2011 and 2041**

	Existing 2011	Proposed 2041
<b>Residential Density</b>	14 / hectare	16.54 / hectare
<b>Household Size</b>	4.89 persons / house	5 persons / house

Source: - Census of India 2011

**FIGURE No-14**  
**Existing and proposed Residential Density**  
**and Household size comparison in 2011 and 2041**



## 2.8 Population Projection

Population projection is a forecasting tool that helps to estimate the changes in population size and demographic structure. It is mandatory for the Govt. Policy makers and planners of Assam, in order to determine the future demand for basic human needs such as food, water, education, energy and services and to forecast future demographic characteristics.

The main objective is to provide or undertake activities aimed at achieving population stabilization, sustainable economic growth, social development and environmental protection by 2041.

Population projection is a scientific attempt to keep into the future population scenario, conditioned by making certain assumptions, using data to the past available at that point of time. Assumptions used and their probability of adhering in future forms a critical input in this mathematical effort. Predicting the future course of human fertility and mortality is not easy, especially when looking beyond much further in time. Medical and health intervention strategies, food production and its equitable availability, climatic variability, socio-cultural setting, economic condition and a host of other factors influence population dynamics, making it a somewhat unpredictable exercise. Therefore, much caution must be exercised when either making or using the population projection and the context of various conditions imposed, should not be lost sight of on the basis of past behaviour and the likely future scenario assumed.

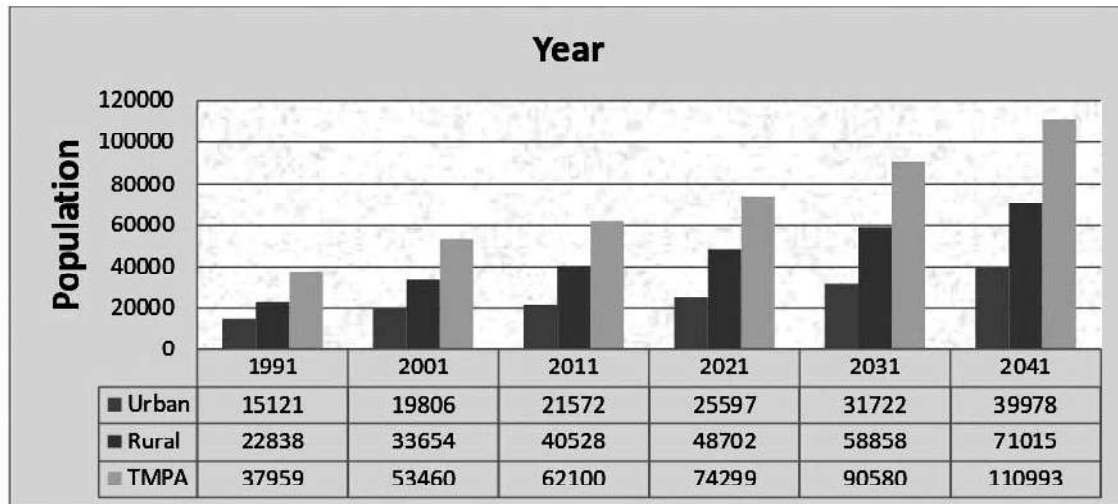
The final population projections of Doomdooma master plan area have thus been arrived at with the entire base population of 1991 accounted for as the natural population, by adding to the natural population the increase due to the natural growth plus the increase due to emigrational flow of trade & commerce including natural increase of migrants. The following table shows the population projection up to 2041 for Doomdooma master plan area.

**TABLE NO - 16**  
**Population projection of Doomdooma master plan area 1991-2041**

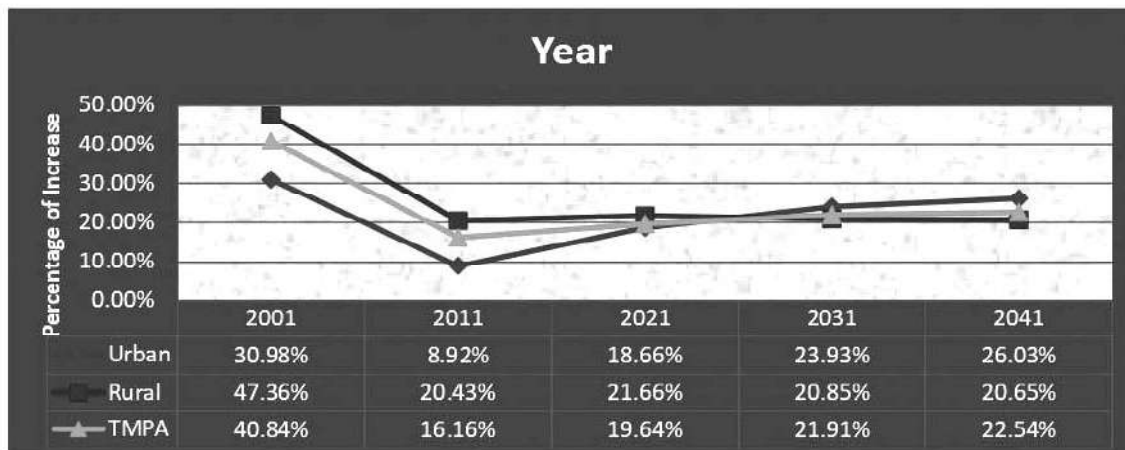
YEAR	Urban Population	% of increase	Rural Population	% of increase	Master Plan Area Population	% of increase
1991	15121		22838		37959	
2001	19806	30.98 %	33654	47.36 %	53460	40.84 %
2011	21572	8.92 %	40528	20.43 %	62100	16.16 %
2021	25597	18.66 %	48702	21.66 %	74299	19.64 %
2031	31722	23.93 %	58858	20.85 %	90580	21.91 %
2041	39978	26.03 %	71015	20.65 %	110993	22.54 %

**Source:** Doomdooma master plan area population of 1991, 2001 and 2011 are from Census of India, Assam and 2021, 2031 and 2041 population figures estimated by Town & Country Planning, Dibrugarh.

**Figure-15**  
**Population projection of Doomdooma master plan area 1991-2041**



**Figure-16**  
**POPULATION PROJECTION (in %) of DOOMDOOMA MASTER PLAN AREA 2001-2041**



## **CHAPTER -3**

### **3. ECONOMIC BASE AND EMPLOYMENT**

#### **3.1 Formal Sector**

Sector which encompasses all jobs with normal hours and regular wages and are recognized as income sources on which taxes must be paid are known as formal sector. In local terms, organized sector or formal sector in India refers to licensed organizations, that is, those who are registered. Only 6 (six) per cent of India's working population is part of the formal sector and the productivity in formal sector is high in comparison to informal sector and also offers higher wages to its employees.

Doomdooma Revenue Circle has the highest number of tea gardens in Assam. Bisakupi T.E., Badlabheta T.E., Daimukhiya T.E., Sakreting T.E., Hahsara T.E., produces export quality tea. In the adjacent of southern part of master plan boundary Hindustan Unilever Limited is situated. It provides an opportunity of employment to a large section of the population of nearby areas. Hindustan Unilever (earlier Hindustan Lever) Limited owns several Tea Gardens in and around Doomdooma apart from the personal care product factory, which was set up in 2001 availing benefits of North East Industrial Policy-1997 including excise duty exemption and capital subsidy. The factory produces personal-care products like skin care cream, body lotion, toothpaste, with an estimated workforce of about 850 people. Doomdooma factory of Hindustan Unilever Limited produces 30,000 metric tons of products per annum, accounting for about 35 percent of the company's total output of personal-care products in the country.



In Doomdooma there is a vast scope for establishing tea related ancillary industries due to the existence of large number of tea gardens and factories. As such this plan asked the Govt. for creation of a conducive atmosphere for optimum use of natural resources as well as tea products private sector and public-private partnership mode to build up a sound economic and industrial base in the town.



### 3.2 Informal Sector

The informal sector is that part of an economy which is neither taxed nor monitored by any form of government. Activities of the informal economy are not included in the GNP. The informal sector makes up a significant portion of the economies in poor state like Assam as well as Doomdooma region. The informal sector of Doomdooma region provides critical economic opportunities for the poor and has been expanding rapidly since the 1990s. The informal sector is largely characterized by several qualities such as Easy Entry, meaning anyone who wishes to join the sector can find some sort of work which will result in cash earnings, a small scale of operations and skills gained outside of a formal education. Most workers in the informal sector, even those are self-employed or wage workers, do not have access to secure work, benefits, welfare protection or representation. The most prevalent types of work in the informal economy are home based workers and street-vendors which are most common in DMPA. Home based workers are more numerous while street-vendors are most visible.

Doomdooma is mainly bounded by tea garden. Although the region is rich in forest resources these have not been exploited fully. There is a good scope for setting up of various wood-based cottage industries like safety matches, tea chests, furniture and pre-fabricated housing units etc.

The industrial development targets as proposed above can be achieved through private sector & Governmental agencies by providing suitable industrial land with necessary infrastructure like roads, uninterrupted power, water and drainage and subsidy on power tariff, financial assistances in the form of soft loan etc. The present concept of public-private partnership (PPP) can also be adapted for faster and smooth development of industries.

Doomdooma town is the nerve centre of business & service of that area. People of nearby areas use to come here to sell their produce and to buy necessary goods for their domestic consumption. The orange production at



Philobari supplies to all over Assam from Doomdooa. There are a number of markets in Doomdooa, such as Doomdooa Vegetable Market, Khan Market, Arandhara Complex, Goyal Towers, Agarwal and Kedia Market, etc. These markets will not only fulfil the demand for Doomdooa and its suburbs but also supply the essential commodities to the people of border areas of Arunachal Pradesh. These markets have played an important role in the economic expansion of Doomdooa town.

**POTENTIAL SECTORS: -**

1. Industry (Tea, Iron & Steel, Fabricated, Machine tool, & food processing)
2. Small scale ancillary industry
3. Agri- Rural economy (Organic Farming, Community farming)
4. Herbal products
5. Tourism

**3.3 Occupational Pattern**

Occupational structure depicts the characteristics of employment for livelihood of the people living in a particular planning area. The engagement of people in agriculture, trade, commerce, industry and white-collar jobs etc. is known as the occupation and employment character. Out of total population of 62100 in 2011 for the master plan area, the number of workers is 24486 persons. The percentage of working population in urban area is 34.31% and in rural area 42.15% in 2011. The percentage of working population in rural area is higher in comparison to urban area. The percentage of working population in the master plan area as a whole is 39.43% in 2011. The sector wise distribution of workers in the master plan area in 2011 is given below. Since Doomdooa is known as a tea-based town, in the map of India due to large number of tea estates and tea factories and it is also reflected in the occupational pattern of master plan area where almost 86.18% of population get their livelihood from tertiary sector (including tea plantation workers).

**TABLE NO.-17**

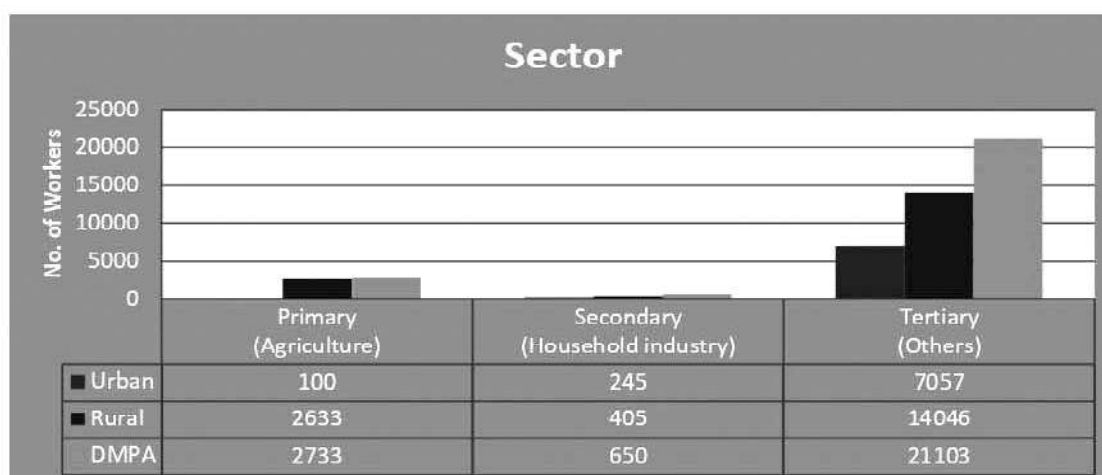
**Sector wise distribution of workers in the master plan area in 2011**

Sl.No.	Category	Urban Area		Rural Area		Doomdooa Master Plan area	
		No. of workers	% of total Urban workers	No. of workers	% of total Rural workers	No. of workers	% of total TMPA workers
1	Primary Sector (Agriculture)	100	1.35	2633	15.41	2733	11.16
2	Secondary Sector (Household Industry)	245	3.31	405	2.37	650	2.66

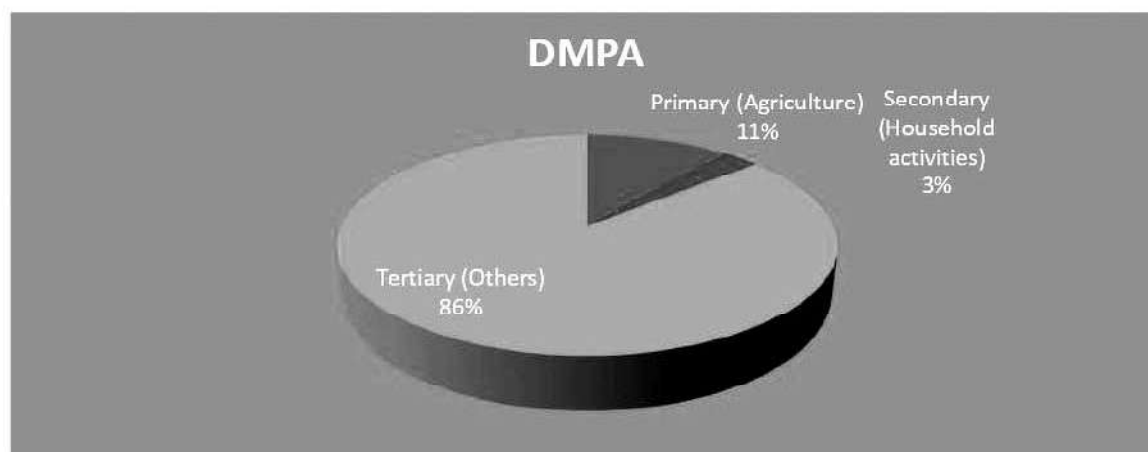
3	Tertiary Sector (Others)	7057	95.34	14046	82.22	21103	86.18
	<b>TOTAL</b>	<b>7402</b>	<b>100</b>	<b>17084</b>	<b>100</b>	<b>24486</b>	<b>100</b>

Source: - Calculated by T&CP, Dibrugarh

**FIGURE No. 17**  
**Sector wise distribution of workers in the master plan area in 2011**



**FIGURE No. 18**  
**Sector wise distribution of workers (%) in the master plan area in 2011**



Doomdooma is place of scenic beauty of nature with various beautiful tea gardens and pleasant weather attracts tourist to visit this place and as a result tourist sector is expanded. Expansion of micro, cottage and service industry in the town and as well as in the out skirts of the town also creates

employment opportunities for many people. In view of the above, the question of livelihood can be separated on the following heads as mentioned below: -

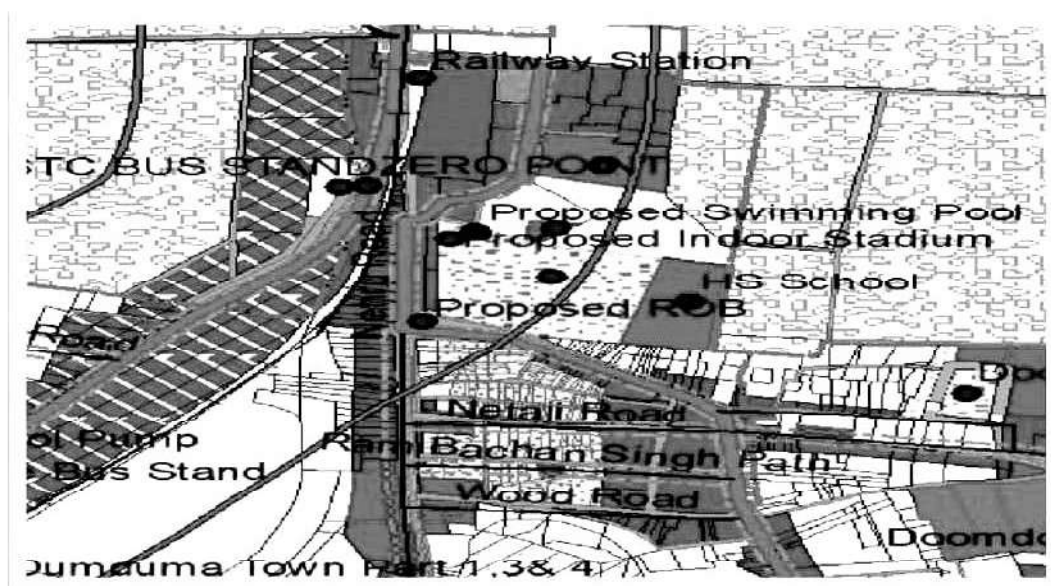
- (a) Engagement in agriculture and tea related activities.
- (b) Engagement in industrial activities including micro and household industries.
- (c) Engagement in trade and commerce.
- (d) Serving as Govt. employee & private employee.

### 3.4 Central Business District and Growth Centre

A Central Business District (CBD) is the commercial and the business center of a town or city, often refer to as the “financial district”. CBD is traditionally developed in historic towns as the market square where there would be trade and other business activity this would typically be in the geographic center of the settlement. However, as town grows and became more populous, CBDs became a more fix location where retail and commerce took place. Some of the key characteristic of the CBDs include: -

1. High concentration of offices, banks, financial institutions and so on
2. High density and high-rise building
3. High land value
4. Lack of open and green space
5. Multistory car parking
6. Departmental stores
7. Well manage infrastructure links with other parts of the towns
8. High concentration of pedestrians

Accordingly, as per the characteristic of Doomdooma town a CDB has been earmarked in Doomdooma master plan as shown in proposed land use and zoning map covering an area of 0.11 sq.km.



**Growth Centre** : The plan proposes a growth centre at Rupai Siding considering the urban growth pattern in recent years.



## **CHAPTER- 4**

### **4. HOUSING AND SHELTER**

#### **4.1 Housing Scenario**

Housing is the basic need of the civilized living. Despite various efforts to solve the housing problem with various policies, there is a huge gap between the supply and the demand for the housing in Assam in general and Doomdooma town in particular. A section of population in Doomdooma either have no place to live in or living under highly unhygienic, inhuman condition and deprivations. Lack of privacy, absence of minimum basic amenities, use of substandard building materials and unhygienic surroundings dominates the scene of settlements. In Doomdooma, while the housing problem in the rural areas, by and large is qualitative in nature and the problem in the urban areas is largely quantitative. The uncontrolled growth of population in urban areas due to migration and other factors have created a high magnitude of housing and infrastructure problem. Due to migration of rural population to the town, available vacant spaces in the urban areas are slowly being converted to unplanned, unhygienic built-up area. Moreover, cost of land in the urban area is also increasing. People in the low- and middle-income group even find it difficult to acquire the land at the present prevailing cost.

The housing pattern of Assam, including Doomdooma region have living habits of such a kind that is different from other states and region of the country. There is a general feeling in Doomdooma region that the basic problem is up gradation of existing units and there is very little need to be done to provide a roof for the utterly shelter less population as the category of such household is very negligible in the region.

An average household size in DMPA has 4.89 persons. The household size is higher in urban area (5.08 persons) as compared to rural areas (4.79 persons).

It is true that development of our country is dependent on the physical and mental health of the people. People who sleep on streets or who live in unhygienic houses cannot fully develop emotionally, intellectually, economically, culturally or as a family. In fact, inadequate and insecure shelter can lead to social and political instability which eventually hampers economic development of our country.

To address this problem, Government of India introduced a new Housing scheme in 2014 namely Pradhan Mantri Awa's Yojana (housing for all by 2022). If this scheme does works it would at least help to reduce India's major contribution with one of the highest homeless populations in the world. Under the PMAY, the main proposal was to construct 20 million homes for those people belonging to the low-income families and Economically Weaker Sections in the identified urban and semi – urban areas by 2022. Accordingly, Doomdooma Municipal Board is also working to provide houses to the poor as per guideline.

## 4.2 Housing Supply Mechanism

Housing supply is the main role of the State Government to improve living condition to the inhabitants either by directly providing houses or by financial assistance. The Government has adopted different policies to solve the housing problems especially for poor and low-income group. However, housing supply must address all social groups in the state including housing in urban areas, semi-urban areas and rural areas. In the recent years private buildings and developer's come forward to solve the problems of housing in urban areas of the state by constructing flat. Such practices have not been seen in Doomdooma recently. In the rural areas of master plan a few houses has been constructed under centrally sponsored housing scheme. The plan recommends that State Housing Board or any other Govt. agency should come forward to build housing colonies at Doomdooma for all sections of people of the state considering its unique scenic beauty of tea gardens.

## 4.3 Housing Condition, Type of Structure etc.

The following table's shows the number and percentage distribution of population and household in respect of different living condition such as structure of house, source of lighting source of drinking water, type of fuel used for Cooking, Banking and Specified assets, Drainage connectivity and availability of kitchen.

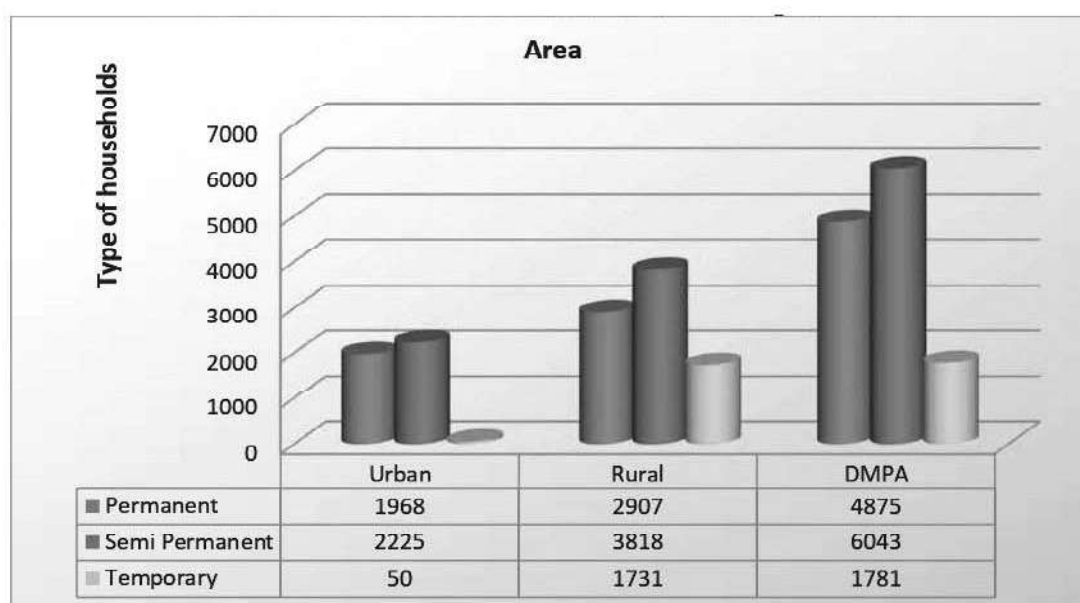
**TABLE NO.18**  
**Distribution of households living in permanent, semi-permanent and temporary houses in 2011 for Doomdooma master plan area**

Name of Area	No. of Households	Permanent	Percentage	Semi-Permanent	Percentage	Temporary	Percentage
Urban	4243	1968	46.38	2225	52.44	50	1.18
Rural	8456	2907	34.38	3818	45.15	1731	20.47
DMPA	12699	4875	38.39	6043	47.59	1781	14.02

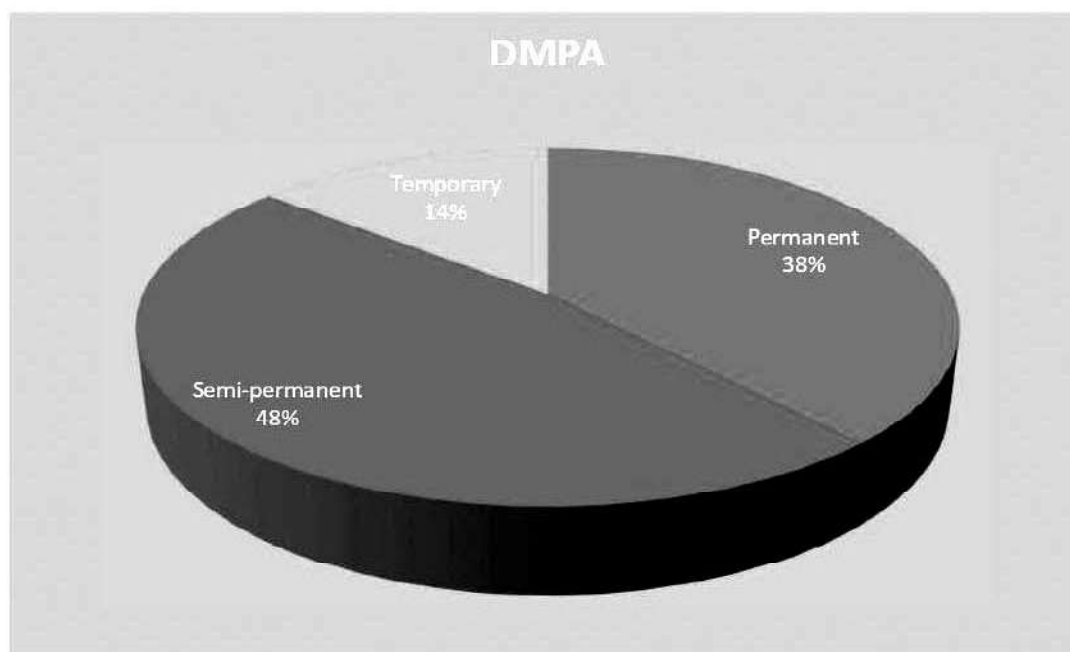
Source: - Census of India 2011



**FIGURE NO.19**  
**Distribution of households living in permanent, semi-permanent and temporary houses in 2011 for Doomdooma master plan area**



**FIGURE NO.20**  
**Percentage Distribution of households living in permanent, semi-permanent and temporary houses in 2011 for Doomdooma master plan area**

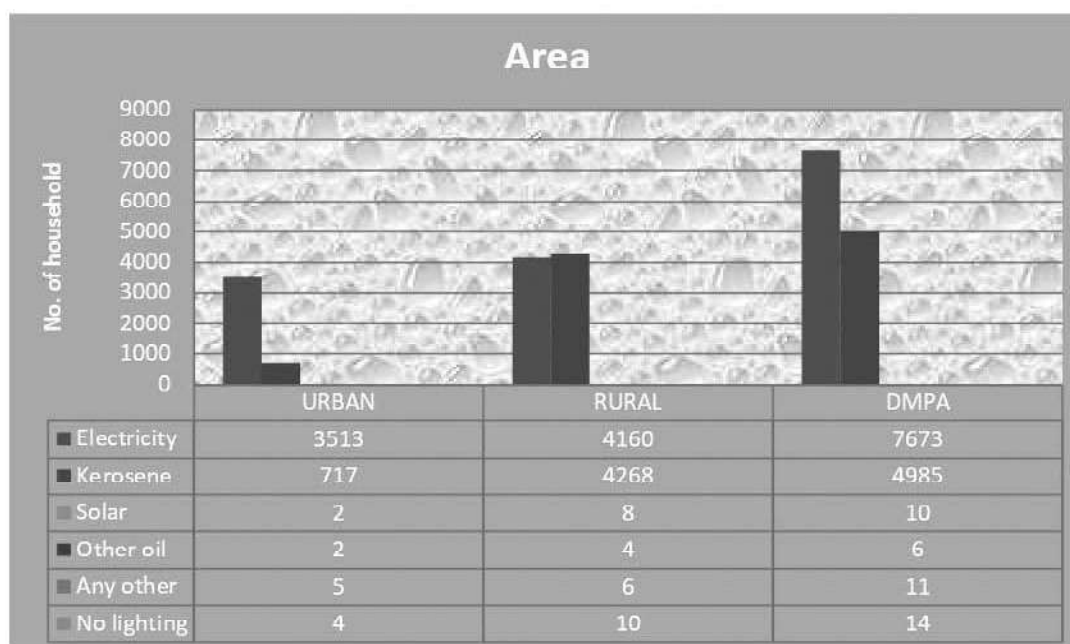


**TABLE NO. 19**  
**Number and % of households by main source of lighting in 2011 for Doomdooma Master Plan area**

Source of lighting	Urban	Percentage	Rural	Percentage	DMPA	Percentage
<b>Electricity</b>	3513	82.80	4160	49.20	7673	60.41
<b>Kerosene</b>	717	16.90	4268	50.47	4985	39.26
<b>Solar</b>	2	0.05	8	0.09	10	0.08
<b>Other Oil</b>	2	0.05	4	0.05	6	0.05
<b>Any other</b>	5	0.12	6	0.07	11	0.09
<b>No lighting</b>	4	0.09	10	0.12	14	0.11
<b>TOTAL</b>	<b>4243</b>	<b>100.00</b>	<b>8456</b>	<b>100.00</b>	<b>12699</b>	<b>100.00</b>

Source: - Census of India 2011

**FIGURE NO.21**  
**Number of households by main source of lighting in 2011 for Doomdooma Master Plan area**



**TABLE NO. 20**  
**Number and percentage of households by main source of drinking water in 2011**  
**for Doomdooma Master Plan**

Source of drinking water	Urban	Percentage	Rural	Percentage	DMPA	Percentage
Tap water from treated source	226	5.33	169	2.00	395	3.11
Tap water from untreated source	112	2.64	46	0.54	158	1.24
Covered well	4	0.09	28	0.33	32	0.25
Uncovered well	3	0.07	67	0.79	70	0.55
Hand pump	2452	57.79	6079	71.89	8531	67.18
Tubewell / borehole	1393	32.83	1944	22.99	3337	26.28
River/Canal	8	0.19	28	0.33	36	0.28
Tank/Pond	2	0.05	32	0.38	34	0.27
Other sources	43	1.01	63	0.75	106	0.83
<b>TOTAL</b>	<b>4243</b>	<b>100.00</b>	<b>8456</b>	<b>100.00</b>	<b>12699</b>	<b>100.00</b>

Source: - Census of India 2011

**FIGURE NO. 22**  
**Number of households by main source of drinking water in 2011 for Doomdooma Master Plan**

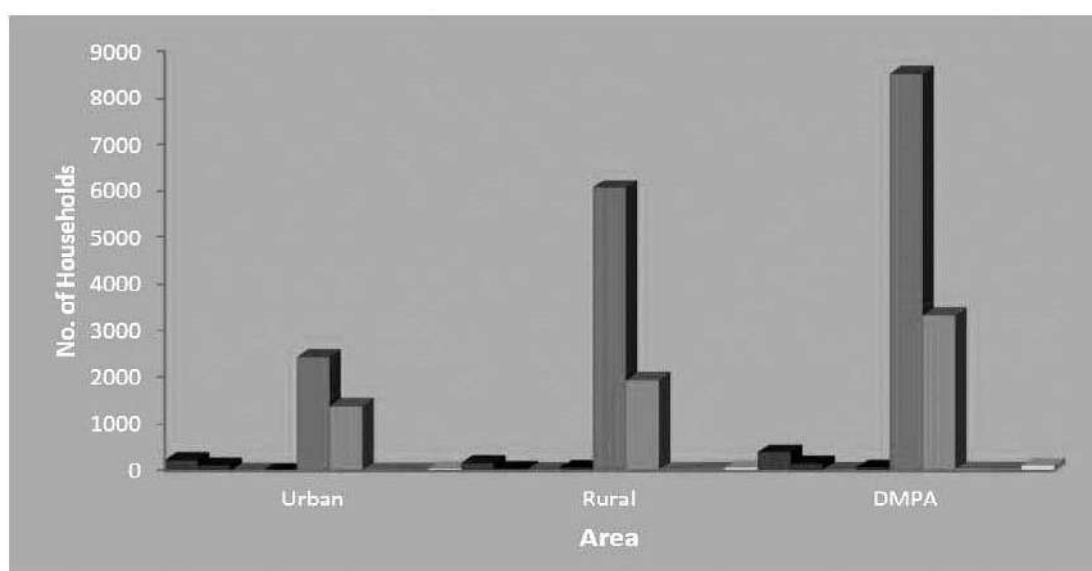
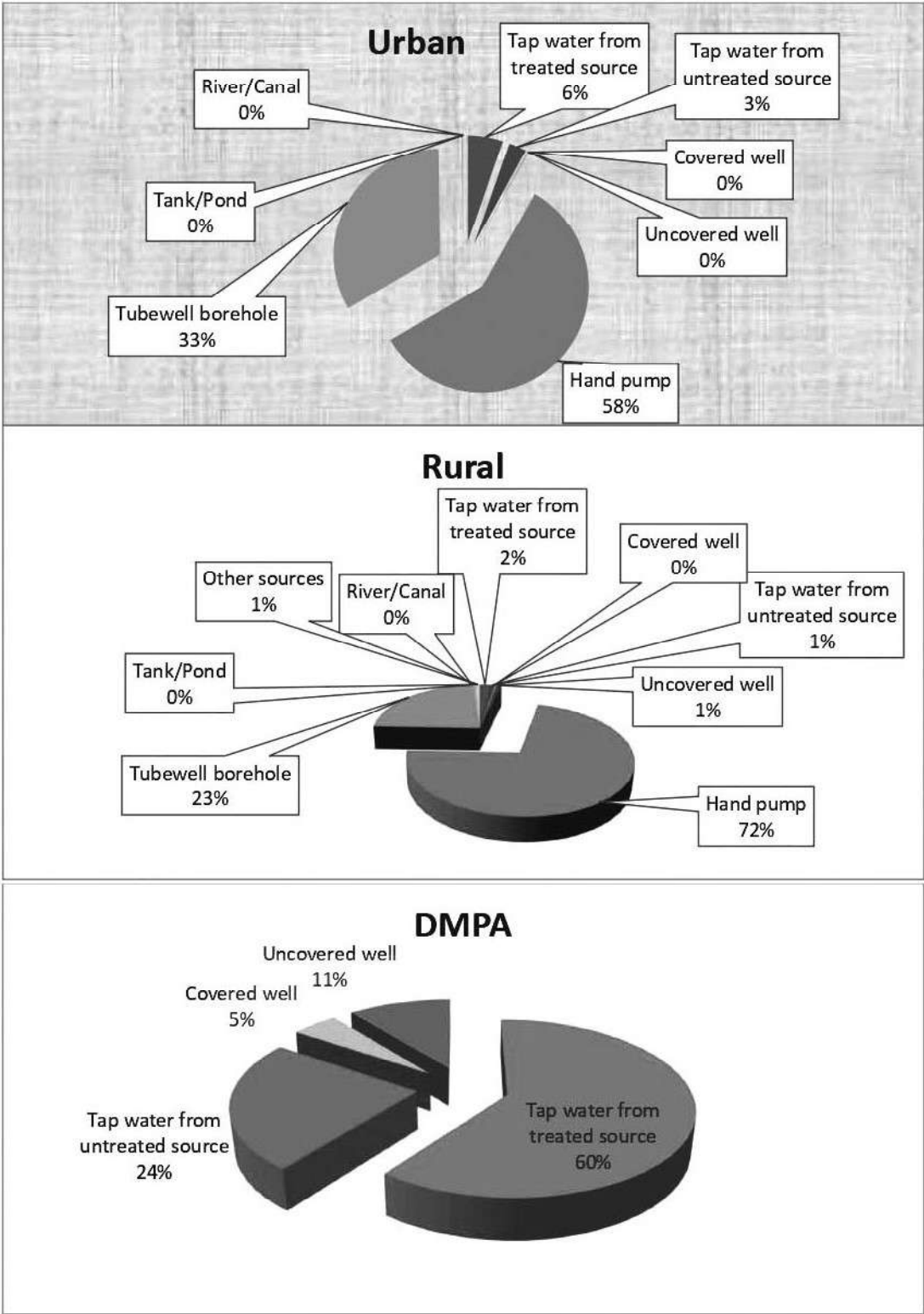


FIGURE NO. 23

Percentage of households by main source of drinking water in 2011  
for Urban, Rural and Doomdooma Master Plan

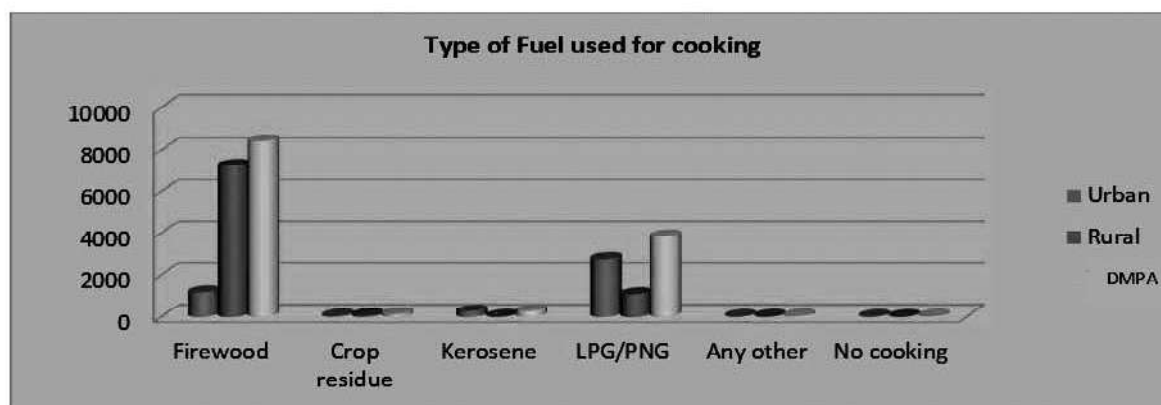


**TABLE NO. 21**  
**Number and percentage of households by type of fuel for cooking in 2011 for**  
**Doomdooma Master Plan**

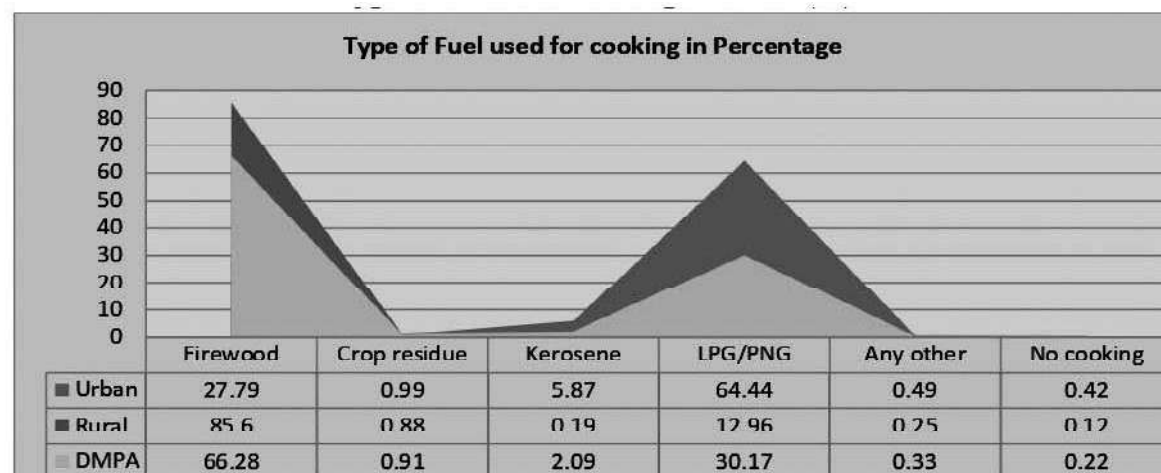
Type of Fuel used for cooking	Urban	Percentage	Rural	Percentage	Total	Percentage
Firewood	1179	27.79	7238	85.60	8417	66.28
Crop residue	42	0.99	74	0.88	116	0.91
Kerosene	249	5.87	16	0.19	265	2.09
LPG/PNG	2734	64.44	1097	12.96	3831	30.17
Any other	21	0.49	21	0.25	42	0.33
No cooking	18	0.42	10	0.12	28	0.22
<b>TOTAL</b>	<b>4243</b>	<b>100</b>	<b>8456</b>	<b>100</b>	<b>12699</b>	<b>100</b>

Source: - Census of India 2011

**FIGURE NO. 24**  
**Type of fuel for cooking in 2011**



**FIGURE NO. 25**  
**Type of fuel for cooking in 2011 (%)**



**TABLE NO.-22**

**Number and percentage of households availing banking services and number of households having each of the specified assets in 2011 for Doomdooma Master Plan**

<b>Banking services and specified assets</b>	<b>Urban</b>	<b>Percentage</b>	<b>Rural</b>	<b>Percentage</b>	<b>Total</b>	<b>Percentage</b>
Total number of households availing banking services	2841	66.96	2943	35.27	5784	45.95
Radio/ Transistor	517	12.18	1613	19.33	2130	16.92
Television	2661	62.72	2461	29.49	5122	40.69
Computer/ Laptop	639	15.06	548	6.57	1187	9.43
Landline telephone	98	2.31	99	1.19	197	1.56
Mobile telephone	3107	73.23	2346	28.11	5453	43.32
Bicycle	2743	64.65	5353	64.15	8096	64.32
Scooter / Motorcycle/ Moped	1015	23.92	669	8.02	1684	13.38
Car/Jeep/ Van	234	5.51	231	2.77	465	3.69
None of the specified assets	409	9.64	1987	23.81	2396	19.03

Source: - Census of India 2011

**Figure No-26**

**Number of households availing banking services and number of households having each of the specified assets in 2011 for Doomdooma Master Plan**

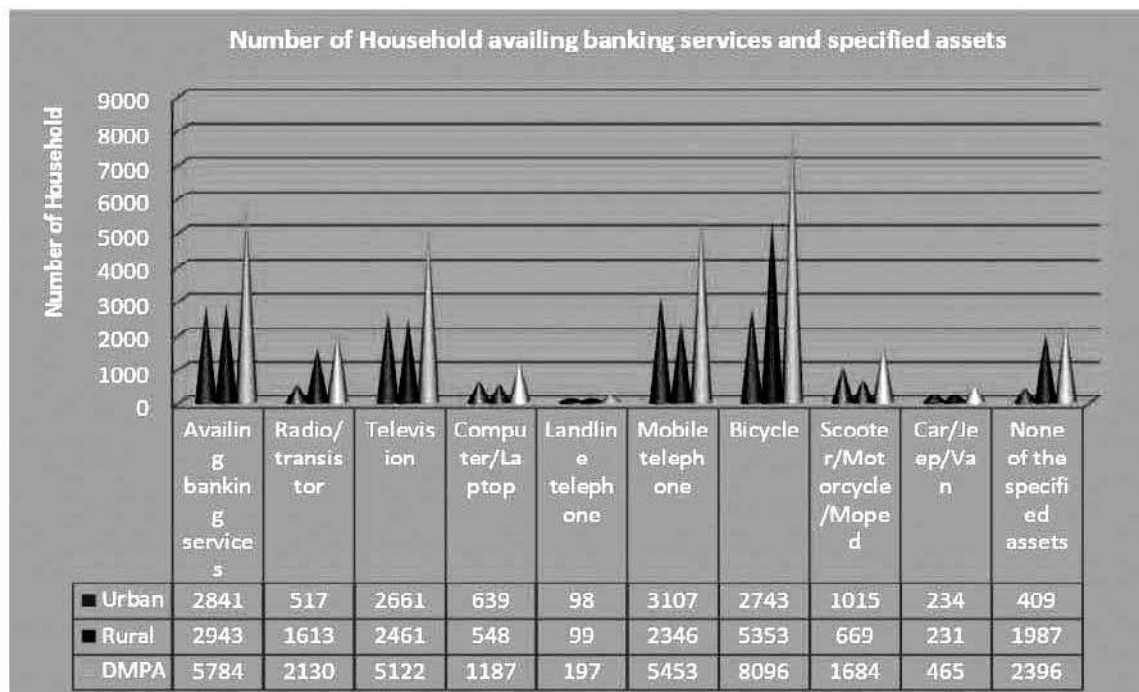




TABLE NO. 23

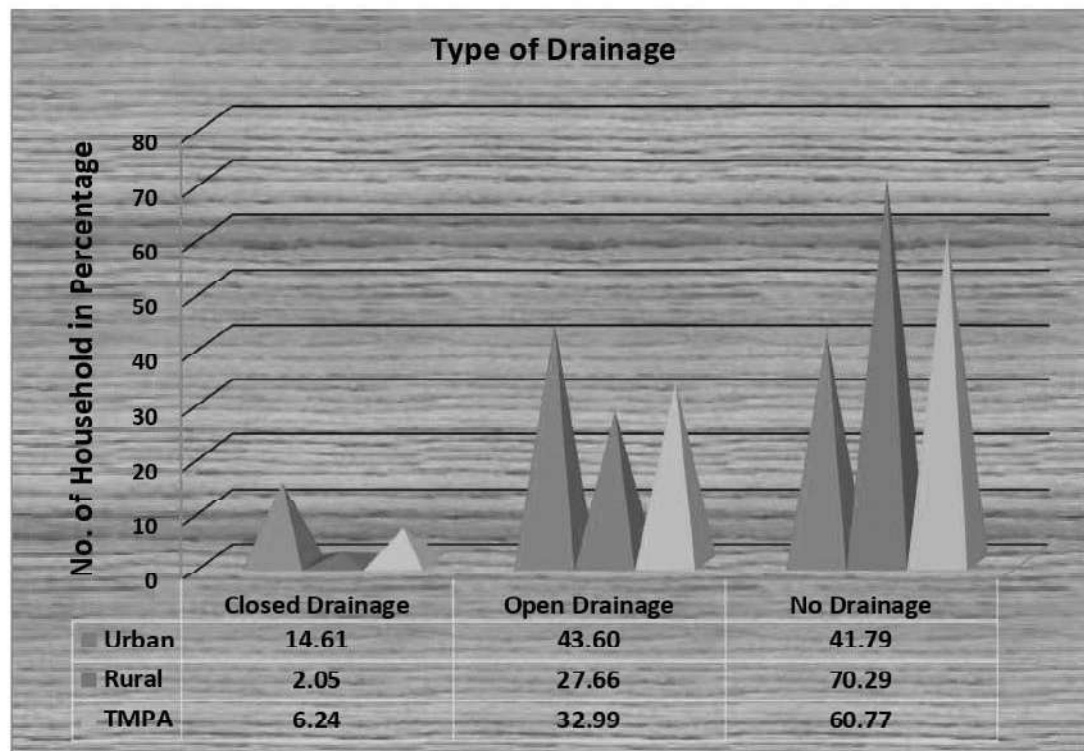
**Number and % of households by type of drainage connectivity  
for waste water outlet in 2011 for Doomdooma Master Plan area**

Type of Drain	Urban	Percentage	Rural	Percentage	Total	Percentage
Closed drainage	620	14.61	173	2.05	793	6.24
Open drainage	1850	43.60	2339	27.66	4189	32.99
No drainage	1773	41.79	5944	70.29	7717	60.77
<b>TOTAL</b>	<b>4243</b>	<b>100</b>	<b>8456</b>	<b>100</b>	<b>12699</b>	<b>100</b>

Source: Census of India 2011

FIGURE NO.27

**Percentage of households by type of drainage connectivity  
for waste water outlet in 2011 for Doomdooma Master Plan area**

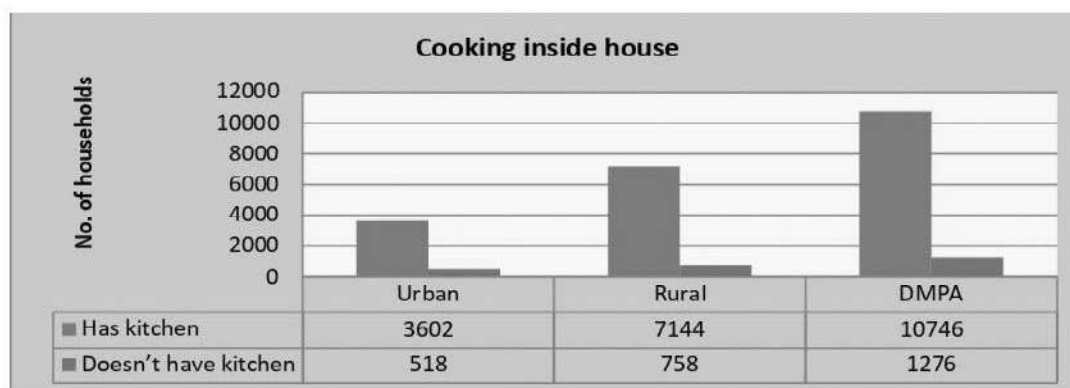


**TABLE NO.-24**  
**Number and % of households by availability of kitchen facility in 2011**  
**for Doomdooma Master Plan area**

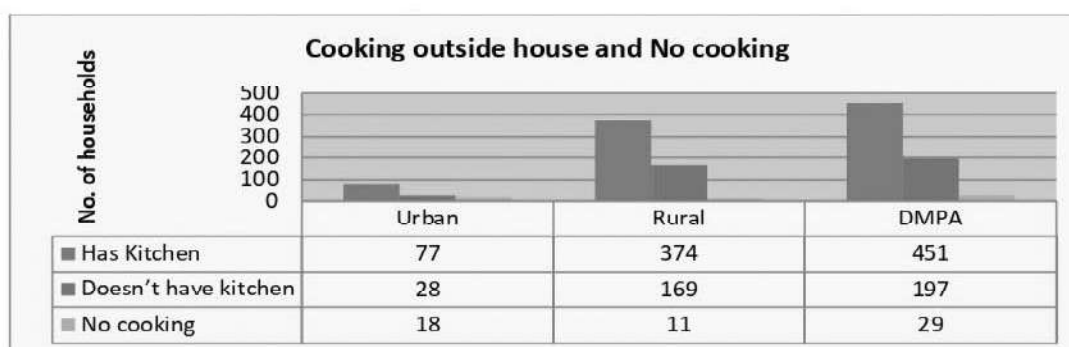
Cooking pattern		Urban	Percentage	Rural	Percentage	DMPA	Percentage
Cooking inside house	Has kitchen	3602	84.89	7144	84.49	10746	84.62
	Doesn't have kitchen	518	12.21	758	8.96	1276	10.05
Cooking outside house	Has kitchen	77	1.81	374	4.42	451	3.55
	Doesn't have kitchen	28	0.66	169	2.00	197	1.55
No cooking		18	0.42	11	0.13	29	0.23
<b>TOTAL</b>		<b>4243</b>	<b>100</b>	<b>8456</b>	<b>100</b>	<b>12699</b>	<b>100</b>

Source: - Census of India 2011

**FIGURE NO.-28**  
**Number of households cooking inside house in DMPA in 2011**



**FIGURE NO.-29**  
**Number of households cooking outside house and no cooking in DMPA in 2011**



#### **4.4 Slum-Squatters and informal housing share :**

Urbanization can be defined as a process which reveals itself through temporal, spatial and sectoral changes in the demographic, social, economic technological and environmental aspects of life in a given society. Urbanization is a progressive concentration of population in urban unit. Urbanization is a process experienced in economically advanced as well as developing countries, cities and towns as centres of agglomeration, with fast economic growth and tertiary job opportunities. In developing countries, the rate of urbanization is very fast and it is not accompanied by industrialization but by the rapid growth of service sector in the economies. During the last three decades, rapid urbanization has been one of the most crucial socio- economic changes of our societies. As population grows more and more, people move into the cities in search of a better life, causing more housing shortage, paucity of civic amenities leading to poverty and in the process creating bigger slums in cities.

But even where urbanization is still low, people are moving to towns and cities. The new arrivals and many long-term residents too are crowded together in over populated houses, dismal tenements and teeming slums. With the growth of cities, the cost of housing and infrastructure is increasing on the one hand and lack of affordable housing facility on the other hand. These have often forced the urban poor to rely on or create their own informal infrastructure, giving way to dramatic growth of slums in urban centres.

Urbanization might also force some people to live in slums when it influences land use by transforming agriculture land into under areas and increase the land value. During the process of urbanization, some agriculture land was used for additional urban activities. That is why as urbanization grows slums also grow in India as well as Assam at a faster rate. As an observation, most of the small Indian towns are much congested and unhygienic although their effect on an individual is mitigated by the openness of the environment.

As per information received from Doomdooma Municipal Board, there is no notified slum pockets in the municipal area, in spite of that there is every possibility of the creation of slum in the town near future due to the increase of the population and industrialization and as such it is necessary for the concern authority to stop such informal habitat in future.

#### **4.5 Housing Stock, Shortage and Need Assessment**

There are about 4243 nos. of houses within urban area and 8456 nos. of houses in rural area of Doomdooma master plan in the year 2011. As a whole in master plan area the number of households are 12699 nos. Since there are 62100 persons in DMPA in the year 2011 and the above housing figure shows that an average of 4.89 persons per household.

To find out the housing requirement for future, a detailed study of family size level of obsolescence, existing shortage etc. are necessary. However, on the

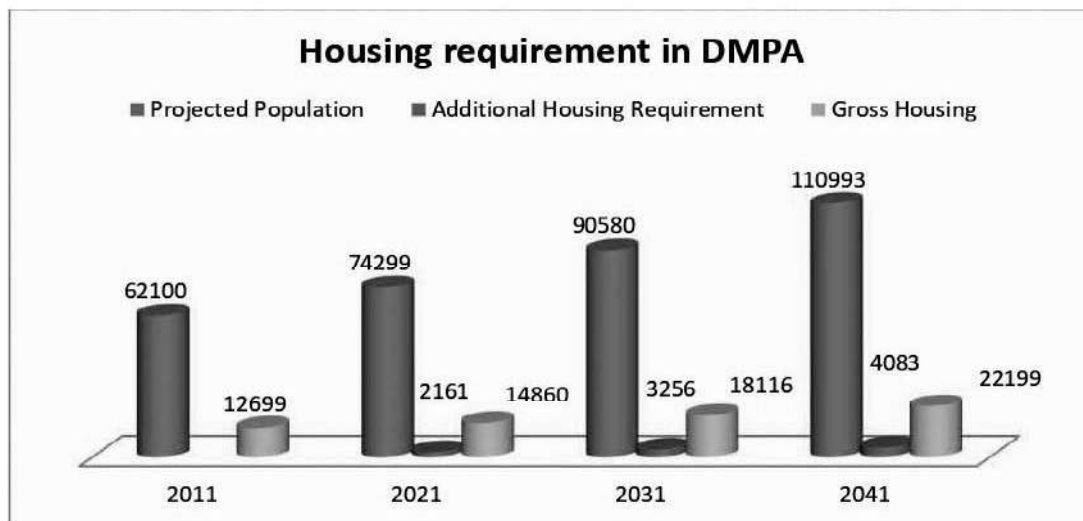
basis of projected population and household size of 5 persons, the additional housing per decade and gross housing up to 2041 is assessed below:

**TABLE No-25**  
**Housing requirement in DMPA for residential purpose upto 2041**

Year	Projected Population	Additional Housing Requirement	Gross Housing
2011	62100 ( Exist)	-	12699 ( Exist)
2021	74299	2161	14860
2031	90580	3256	18116
2041	110993	4083	22199
	<b>Total</b>	<b>9500</b>	

Source: - Calculated by TCP, Dibrugarh

**FIGURE No.30**  
**Housing requirement in DMPA for residential purpose upto 2041**



Since 12699 nos. of houses have been used for residential purposes in 2011 in Doomdooma master plan area and the above table reveals that additional housing requirement in the year 2021 was 2161 no. of houses and up to 2041 the total additional requirement of houses will be 9500 nos. @ 5 persons per house.

CHAPTER-5**5 TRANSPORTATION****5.1 Network of Roads**

Urban road network is considered as engines of economic growth. In some areas of the town the road width is not sufficient and well equipped. Doomdooma Gandhi Chowk level crossing towards Doomdooma market is very narrow and remains always busy and requires immediate improvement. The roads within the residential areas in Doomdooma Municipal Board area are too narrow. Widening of these roads is urgently necessary.

For smooth traffic movement in Doomdooma master plan area the plan provides 251 hectares of land, which constitute 4.28 % of the master plan area and 10.70 % of total developed area for circulation purposes. In this plan, emphasis has been given on the following aspects for effective transportation system in Doomdooma master plan area.



- (i) Optimum use of the existing transportation system through improved traffic operation and controls.
- (ii) Improvement of the existing road network through strengthening and widening.
- (iii) Improvement of Railway level crossing.
- (iv) Improvement of old A.T. Road and bridge.
- (v) Provision for adequate parking facilities.
- (vi) Development of new roads and other transport facilities.

The plan recommends development of road infrastructure as per table given below:

A well laid transportation network solves majority of the urban issues and increases the efficiency of the town.

Recommendation of the road network is made as per the **IRC guidelines** and in accordance with the provisions of **“THE ASSAM PUBLIC WORKS (REGULATION OF ROAD DEVELOPMENT AND ROAD TRANSPORT) ACT- 2010”** with recommendation that all new road proposal should have utility duct.

**TABLE NO.-26**  
**CATEGORY OF ROADS**

Category of roads	Name	Existing width (in metre)	Recommended width (in metre)
<b>Major</b>	Assam Trunk Road (NH-15)	13	Within Urban area-30 Outside Urban area-45
	Ruapi – Kakopothar road	12	25
<b>Arterial</b>	Doomdooma-Tingrai Road	11	15
	Philobari Road	10	15
	Doomdooma-Baghjan Road	7	10
<b>Sub-Arterial</b>	Milan Tirtha Road	7	10
	Doomdooma College Road	7	10
	Gyanjyoti Road	6	8.5
	Netaji Road	6	8.5
	Ram Bachan Singh Road	6	8.5
	GNB Road	6	8.5
	Azad Road	6	8.5
	Kalibari Road	3	6.6
	Old A.T. Road	10	12
<b>Other Road</b>	All other roads not mentioned above		Min 8 & 4.5 for single plot

Source: - Prop. By T&CP, Dibrugarh

## 5.2 Overview of Critical Roads and Improvements

Doomdooma is well connected with the rest of the country by roads and railways. The N.H.- 15 and NH-115 have connected Doomdooma with other places as shown below:

- a) Doomdooma to Tinsukia
- b) Doomdooma to Chapakhowa via Talap



- c) Doomdooma to Roing via Chapakhowa
- d) Doomdooma to Dibrugarh via Tinsukia
- e) Doomdooma to Namsai via Kakopothar

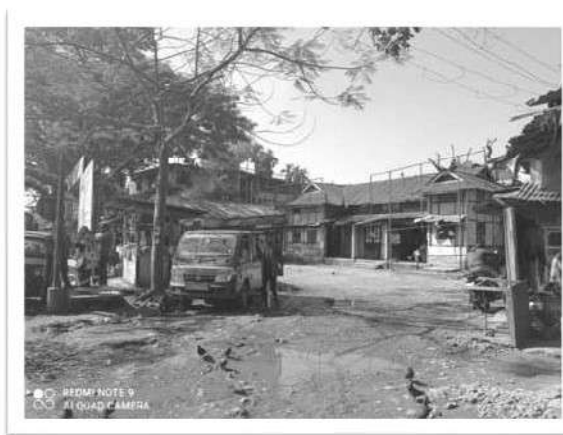
Doomdooma is also connected with railway network from Dangori to Tinsukia. Beside train plying of taxis, buses, winger and trucks are playing a major role in transporting passengers and goods to and from Doomdooma.

Doomdooma town has gained importance in the field of tea-industry and business owing to tea and other industries and existence of vegetables and fruits in nearby areas. This has resulted in to increase of vehicles on the roads of Doomdooma town. On the other hand, a good number of ASTC buses, private buses and winger ply through the town. The buses and small vehicles plying through Doomdooma town follow the following routes:

- a) Roing of Arunachal Pradesh to Tinsukia, Dibrugarh via Doomdooma.
- b) Namsai to Tinsukia-Dibrugarh via Doomdooma.
- c) Doomdooma to Guwahati via Tinsukia (night service)

### 5.3 Bus Transport Terminals & Zero point

At present ASTC bus station is located along the road side of N.H 15 near the junction of NH-15 and Doomdooma market. There is one organized public bus stand in Doomdooma. Generally public buses stop at the side of NH-15. These stations serve intra - urban traffic, i.e., regional traffic but create lots of traffic congestion in the area.



*ASTC bus stand ( Zero Point)*



*Public bus stoppage*

At present 1 Auto stand is located near the Doomdooma Baghjaan road by the side of NH-15 and another at Gandhi Chowk. This stand is also creating congestion and obstruction to the smooth flow of traffic.



In Doomdooma town the surface condition of the road is not up to the mark. The roads appear to be incapable of taking additional traffic load. Access roads are narrow with poor surface. Most of the traffic is generated from Doomdooma river bridge to the point of Rupai Siding and another traffic generated from Gandhi Chowk to Philobari road via Doomdooma market. But the entire area does not have organized parking space.

Keeping in view the above, the plan recommends expansion and renovation of the existing A.S.T.C. Bus station and public bus stands.

The plan suggests to shift the existing Auto stand located near Gandhi Chowk to near Doomdooma Baghjan road to reduce the traffic congestion in the area.

#### 5.4 Freight Zones Logistics

Presently there is no truck terminus at Doomdooma. So, the plan proposes one truck terminus at Hahsara 15/12 NLR by the side of NH-15 under **Pradhan Mantri Gati Shakti movement**.

#### 5.5 Footpaths and Bicycle Tracks

Footpaths are normally designed for pedestrian for pleasant and comfortable walking. In Doomdooma except in market area, there is no any footpath in other roads of the town. There is no cycle track in the town.

Exclusive lane for slow moving vehicles, pedestrians along with spaces for street vendors are also essential for overall development of a town. The hawkers and street vendors also play an important role in urban economy. The notification of vending and no vending zone by the authority is mandatory as per the provisions of the Street Vendors Act, 2014. This improves the capacity of the lanes designed for motorized vehicles and increases the safety of slow-moving vehicles and pedestrians.

The plan suggests construction of footpath in both sides of all the roads in the town by the concerned authority. The plan also earmarks cycle track in NH-15 from Rupai-Siding to Athengia village.

The width of footpath as per URDPFI guidelines is follows:

**TABLE NO.-27**  
**WIDTH OF FOOTPATH**

Sl. No.	Description	Width(mtr)
1	Minimum free walkway width in residential/mixed use areas	1.8
2	Commercial/Mixed Use Areas	2.5

The URDPFI Guideline for cycle /NMT track are given in the following table:

**TABLE NO. - 28**  
**CYCLE TRACK**

Sl. No.	Arterial Roads	SUB Arterial Roads	Distributary Road	Access Roads
<b>Non-Motorized Vehicle</b>	Segregated cycle track	Segregated cycle track	Cycle lane	Mixed/traffic
<b>Location</b>	Between carriageway or street parking and footpath on either edge of the carriageway	Between carriageway or street parking and footpath on either edge of the carriageway	On the edge of the carriage, adjacent to the footpath or parking	Not applicable
<b>Gradient</b>	1:12-1:20	1:12-1:20	1:12-1:20	1:12-1:20
<b>Lane width</b>	2.2 to 5.0m	2.2 to 5.0m	2.2 to 5.0m	Mixed with motorized vehicular traffic
<b>Minimum width</b>	2.5 for a two lane cycle track and 1.9m for a common cycle track and footpath	2.0 for a two lane cycle track and 1.7m for a common cycle track and footpath	1.5m	1m(painted)

### 5.6 Parking

At present, there is no organized parking space for the cars, two wheelers in the market area. The cars are generally parked on the main road of the town. The roads are already overcrowded with traffic and further encroachment on road surface by cars and two wheelers has resulted obstructed traffic congestion.

The recommended equivalent car space (ECS) required for different type of vehicles as per **URDPFI** guidelines are given in the following table for design of parking areas

**TABLE NO.-29**  
**PARKING SPACE**

Sl. No.	Vehicle type	ECS
1	Car /taxi	1.00
2	Two-Wheeler	0.25
3	Auto Rickshaw	0.50
4	Bicycle	0.10
5	Trucks/Buses	2.5
6	Emergency Vehicles	2.5
7	Rickshaw	0.8

### 5.7 Areas with Major Traffic congestion & Parking issues, Accident prone area

The maximum inter -town traffic volume is generated on the road starting from Doomdooma river bridge and moving towards Talap and towards Philobari road. This is the most vital link for the town. The second inter town traffic generating road is Rupai-Siding towards Kakopothar.

The presence mixed traffic on narrow roads has accelerated traffic congestion in Gandhi Chowk, and in Doomdooma market. The town has mainly two accident prone areas, namely the junction point of NH-15 and Doomdooma market near Gandhi Chowk and another at the junction point of NII-15 and NII-115 in Rupai-Siding. Proper road signage and marking in the road in these areas is the need of the hour.

### 5.8 Improvement of Rotary & Junctions

Improvement of all road junctions as per IRC guidelines is urgent and important for improving the traffic scenario. For smooth traffic in NH-15 and

roads leading towards Doomdooma market, this plan proposes a ROB at the junction point of NH-15 and Doomdooma market and a bridge over Doomdooma river connecting old A.T. road.

### **5.9 Fixation of road level & plinth level in CMP area with Signage, Availability & Requirement**

#### **➤ Fixation of road level**

As per city planning norms, road levels must always be lower than that the adjoining properties they serve. Since plinth levels of once constructed building don't change (unless they are demolished under reconstruction), it should be obligatory on the part of appropriate authority to ensure that road/lane levels are not raised unnecessarily as and when they are resurfaced in subsequent years. Since this aspect is not being judiciously taken into account usually by the executing agencies during road repairs many old buildings in our cities & towns which were constructed 20-30 years ago are now at the same and in few cases even below adjoining road levels which have been raised arbitrarily without evaluating their resultant impact on these adjoining areas served by this road network. In most well governed cities of the world, road level once fixed at the time of their initial construction remain usually same and are not tampered with later on.

Accordingly, the plan suggests the concerned authority to use contour map and HFL for fixation of road level in master plan area. The plan proposes for installation of post for fixation of road level by PWD (R).

#### **➤ Fixation of plinth level should be done based on the following :-**

Works department like PWD (R) , NH etc. shall erect permanent posts at suitable location / land mark points and at road intersection point depicting the RL of road and HFL of that area carried out from nearest Railway platform or from other specific location where bench mark from Mean Sea Level -MSL (is) recorded so that the same can be taken as bench mark for fixation of plinth level of buildings of near by areas. The maximum allowable height of plinth is RL of adjoining road + 0.75 mtr.

However, roads where HFL is above road level, the road level for fixation of plinth height shall be considered as HFL and in cases where road level is above HFL, the existing road level shall be considered as final road level of fixation of plinth height.

#### **➤ Signage**

The ULB, traffic & other concerned departments will assess the requirement of Signage and accordingly install the signage as per the rules and regulations for the beautification of the town as well as smooth flow of traffic and public convenience.

### 5.10 Transit Oriented Development

Urbanization of Assam has led to horizontal growth of many towns thus creating problems of urban sprawl. This has resulted in increase in trip length and higher usage of private vehicle, problem of pollution and increase the demand for infrastructure.

TOD is essentially any development, macro or micro i.e., focused on the integration of land use and transport planning and aims to develop planned suitable urban growth centers, having walkable and livable communes with high density mix land-use. Citizens have access to open green space and public spaces and at the same time transit facility is efficiently utilized.

As such, this plan earmarked a TOD zone of 3.7 km in Doomdooma master plan for improving the economic and financial viability of Doomdooma town and Rupai growth centre. The TOD zones have been earmarked in proposed land use, circulation map & zoning map and the said area is mentioned below: -

1. Along the NH-15 from Doomdooma Bridge to the junction point of Rupai Kakopothar road and NH-15



### 5.11 Major Proposals

- I. One truck stand is proposed at Hahsara 15/12 NLR and the area is earmarked in the proposed land use map.
- II. The authority concern may develop existing ASTC bus stand with all facilities required for commuters.
- III. This plan proposes a ROB at the junction point of NH-15 and Doomdooma market.
- IV. Considering the scenic beauty of the town, the plan recommends plantation along the major roads and development of traffic points to augment the aesthetic beauty of the town.
- V. This plan proposes a cycle track in NH 15 from Rupai Siding to Athengia village.
- VI. This plan proposes development of old A.T. road with bridge over Doomdooma river.



**CHAPTER 6****6 INFRASTRUCTURE, PUBLIC UTILITY & SERVICES****6.1 Physical Infrastructure****6.1.1 Water Supply**

For the rest of the town and rural areas, the only source of water is tube well and the ring wells as ground water and surface water is readily available at Doomdooma and its adjoining areas. Though the tube well and ring well are efficiently functioning, it will no longer be considered as free from contamination due to presence of a number of pit latrines. A comprehensive water supply scheme with treatment plant covering the population up to 2041 is the need of the hour.

The objective of a public protected water supply system is to supply safe and clean water in adequate quantity, conveniently and as economically as possible. Rising demand of water due to rapid urbanization is putting enormous stress while planning the water supply system for an area; it is evident to consider water conservation aspects, which may be possible through optimal use of available water resources, prevention and control of water and effective demand management.



*Doomdooma town (2 No. Mandal) Water Supply Scheme*



**6.1.2 URDPFI Guideline's for Water Requirement**

As per URDPFI guidelines the norms for water requirement for institutional buildings are given below: -

**TABLE NO-30**  
**REQUIREMENT FOR INSTITUTIONAL BUILDINGS**

<b>Sl.No</b>	<b>Institutions</b>	<b>Litters per head per day</b>
1.	Hospitals (including laundry)	
a)	No. of beds exceeding 100	450 (per bed)
b)	No. of beds not exceeding 1000	350 (per bed)
2.	Hotels	180 (per bed)
3.	Hostels	135
4	Boarding Schools	135
5	Restaurants	70 (per seat)
6	Day school / colleges	45
7	Offices	45
8	Cinema, concert halls and theatre	45

In addition to the above the fire- fighting water demand is also as a function of population. It is desirable that one-third of fire-fighting requirements from part of the service storage. The balance requirement may be distributed to several state tanks of strategic points. These strategic points may be filled from nearby pond streams or canals by water tankers wherever feasible.

The plan also recommends preparation of a comprehensive potable water supply scheme as per guideline of CPHEEO manual of Govt. of India to cater the needs of the estimated population of 110993 up to 2041 by a competent authority.

### 6.1.3 Drainage system

The drainage system differs in Doomdooa Municipal Board area and rural areas within master plan. The drainage system in Doomdooa municipal area is relatively good condition as compared to rural areas.



*Covered Drain*

The existing natural drains of master plan area are not properly defined and are slowly being encroached by the growing population. The existing drainage of these areas does not have a proper slope resulting in water logging at different areas during rainy season. Most of the drains in rural areas of master plan are kutchra drains and not link up with natural channels and also do not have sufficient cross section to drain out surface water after heavy shower. As such, it is an urgent necessity of Doomdooa Municipal Board and concerned authorities to construct few drains at certain location of the town and in rural areas to drain out storm water. It is also important on the part of DMB for the development of the existing natural stream which is running through the town for removing the water logging problem in the town as well as in residential areas. The existing infrastructure conditions of the town reveals that the priority of the town is an efficient storm water drainage system where by storm water that accumulates within the populous localities and commercial areas and drained out through scientifically designed storm water drainage system. This plan also recommends hierarchy of drainage system for the entire master plan area because almost 60.77% households in the master plan area still not connected with the drainage system. As such, it is necessary to prepare a

Drainage master plan for Doomdoooma by the concerned authority to solve the problem of storm water and water-logging in the town and its adjoining areas.



#### 6.1.4 Sanitation

In Doomdoooma urban area almost 41.98% household use septic tank and in rural area only 12.41% households use septic tank in 2011. In the Master Plan area as a whole the percentage of households use septic tank are 22.38%. In the Master Plan Area, almost 31.97% household use pit latrine without slab which are not conducive for health and environment. This type of condition is prevailed in all over India. As such, The Government of India in the year 2014 introduced the Swachh Bharat Mission (SBM) which is being implemented by the Ministry of Urban development and Ministry of Drinking and sanitation for urban and rural areas respectively. The main objective of the mission is – Elimination of open defecation, Eradication of manual scavenging, Modern and scientific Municipal Solid Waste Management, to effect behavioural changed regarding healthy sanitation practices, generate awareness about sanitation and its linkage with public health, capacity Augmentation for ULB's.

Swachh Bharat Mission (SBM) will improve the health conditions of every Indians. This practice will be able to prevent many types of diseases in the country and we will be able to have a happy and healthy society. SBM can be able to build a better eco-friendly environment in the country and can give better life to our upcoming generations.

SBM will also help in generating employment through tourism and boos India's Gross Domestic Product (GDP).

Unhygienic condition's is one of the major root courses of diseases/illness. Any disease or illness has financial impact both in terms of expenditure and potential revenue earning. As such, SBM will have positive impact on India's health care sector. SBM will plug the loss due to unhygienic and lacks of cleanliness and will help to case burden on existing health care facilities.

SBM will lead to Health India which in turn increases productivity of Indians. High productivity means high earning potential. Under current economic conditions, India desperately need Foreign Direct Investment (FDI) for this the country must be clean.

SBM will benefit socially and financially each & every citizen of India. If we want financial growth then we have to collectively make SBM a roaring success in future. SBM is one of the critical links towards economic success of India.

Under SBM it is estimated that about 20% of the urban household in towns, who are currently practicing open defecation are likely to use community toilets as a solution due to land and space constraints in constructing individual household latrines. For this component beneficiaries shall be groups of households in urban area whose members practice open defecation and who do not have access of two household toilets and for whom the construction of individual household toilet is not feasible.

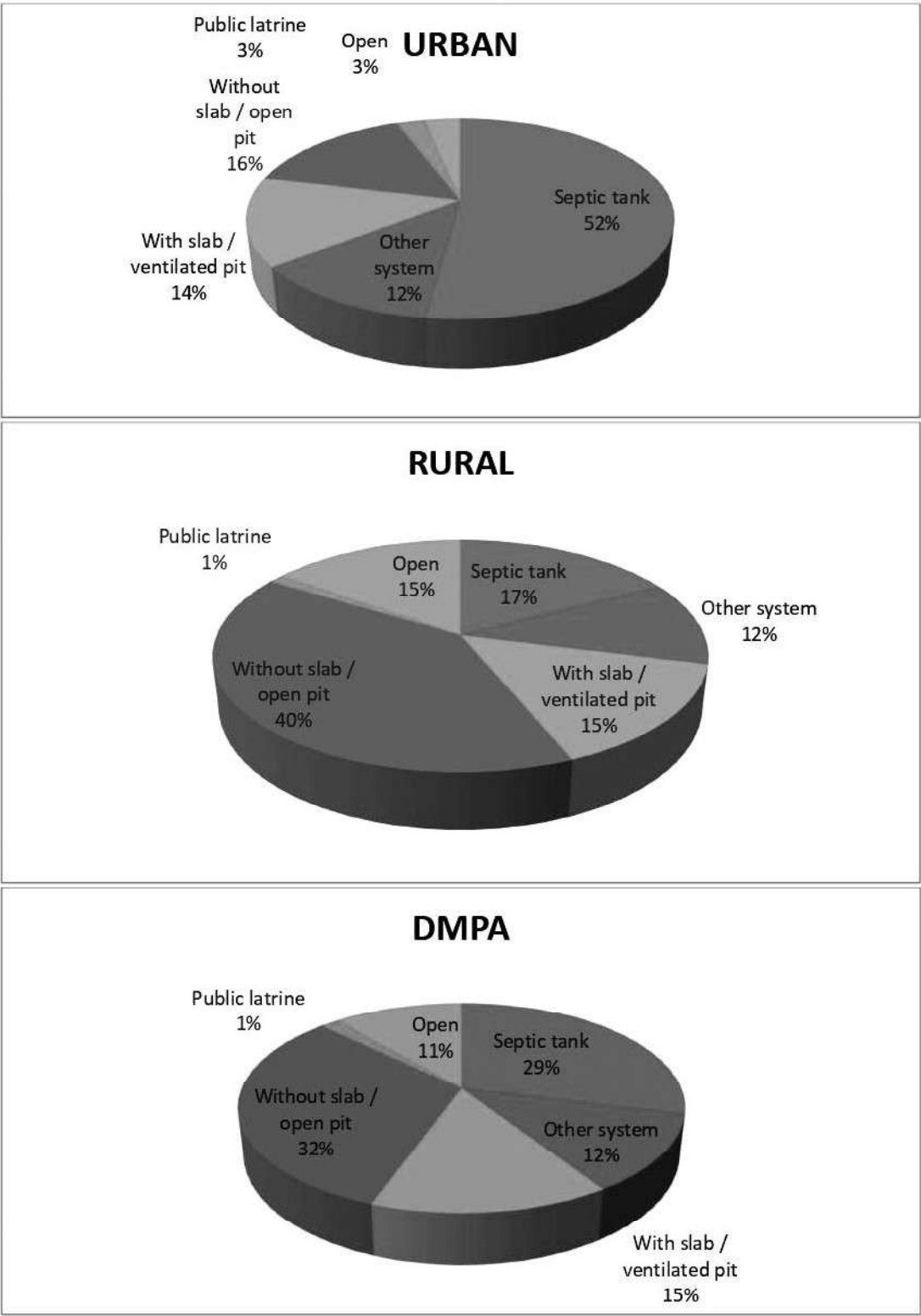
Under SBM, ULB's will ensure that a sufficient number of public toilets to be constructed in the town. All prominent places within the town attracting floating population should be covered. Cares should be taken to ensure that these facilities have adequate provision for man, woman and facilities for the disabled (e.g., ramp provision, Braille signage etc.) wherever necessary.

**TABLE NO. - 31**  
**Number and % of households by type of latrine**  
**in 2011 for Doomdooma Master Plan area**

Type of Latrine		Urban	%	Rural	%	DMPA	%
Flush / Pour latrine	Septic tank	2214	52.18	1460	17.27	3674	28.93
	Other system	524	12.35	991	11.72	1515	11.93
Pit Latrine	With slab / ventilated pit	607	14.31	1252	14.81	1859	14.64
	Without slab / open pit	653	15.39	3372	39.88	4025	31.70
No latrine without premise	Public latrine	108	2.55	97	1.15	205	1.61
	Open	137	3.22	1284	15.17	1421	11.19
TOTAL		4243	100	8456	100	12699	100

Source: - Census of India 2011

**FIGURE -31**  
**Percentage of households by type of latrine in 2011**  
**for Doomdooma Master Plan area**



**URDPFI Guidelines for Public Toilets**

The general standard for public toilets in public area and modified norms for public toilets in public places and roads recommended in URDPFI guideline are given below: -

**TABLE NO. - 32**  
**NORMS FOR PUBLIC TOILETS IN PUBLIC AREA.**

<b>TYPE</b>	<b>NORMS FOR TOILETS</b>
Public toilets	On road and for open areas every 1 Km. including parks, open air theater, car parks and fuel station. Toilets shall be disabled friendly and in 50: 50 ratios (M / F)
Signage	Signboards on main streets shall give directions and mention the distance to reach the nearest public convenience of visitors. Helpline number shall be pasted on all toilets for complaints / queries
Modes	Pay and use or free in pay and use toilets entry is allowed on payment to the attendant.
Maintenance / Cleaning	The toilets have both men and women attendants. Alternatively automatic cleaning cycle covering flush, toilet bowl, seat, hand wash basin, disinfecting of floor and complete drying after each use can be adopted. Public toilets shall be open 24 hrs.

The plan proposes urban local body can follow the above norms for construction of the public toilet and maintenance in strategic points thereafter.

**6.1.5 Sewerage Network**

Like the rest of the towns of the state, Doomdooma also does not have sewerage network and treatment plant. Human night soil is generally disposed at conventional septic tanks or low-cost sanitary pits. Till the execution of the sewerage scheme, it is recommended to encourage the people to construct sanitary latrines of their own and to cover poor families under Swachh Bharat Mission. The use of service latrine should be banned as per law for the health and hygiene of the community.

**6.1.6 Solid Waste Management**

Solid Waste Management (SWM) is a process which involves collecting and disposing of solid wastes is unavoidable by products of human activities.



Municipal Solid Waste (MSW) in India which includes garbage, metals, bottle or glass, plastics, paper and fabric have been increasing in recent years because of population increase, rapid urbanization, technology and improper through-way culture of people. In general, the MSWM is the collection, treatment and disposal of solid waste generated by all categories of Municipal population in an environmentally, friendly and socially satisfactory manner using the available resources most efficiently. Urban bodies are generally responsible for providing the SWM services and nearly all local government laws give exclusive mandate of collecting all the wastes disposed outside homes or establishments. Effective solid waste collection and disposal is a vital component of public service provisions and should take priority particularly in emerging towns. Because, failing to have such services can result in many unfavourable outcomes in the long run and this may have serious adverse effect on public health and the environment.

The generation of solid waste has become an increasing environmental and public health problem in every urban area of India. The most urban areas of India rapid urbanization and population growth has produced tremendous amounts of solid and liquid wastes that degrade the environment and destroy the resources. In the past, most policies and frameworks governing solid waste management in India have been directed at the service providers and less attention has been paid to the demand side aspect of the problem. As such, in present environmentally safe and ethical solid waste management system in Doomdooma town and its adjoining areas must be justified. Doomdooma town is growing very rapidly in recent years. Unplanned growth and development of the town in recent years and environmentally unsafe disposal of urban solid waste by residents of some parts of the town over the last two decades have been a major cause of the life threatens health hazards in the town. The town generates 7 TPD of solid wastes. In master plan area as a whole total solid waste generate 18 TPD @ 290 gm per person and upto 2041 the total solid waste will be generated in the master plan area 32.18 TPD for the projected population of 110993 and 22199 household respectively. This plan suggests to develop a scientific Solid Waste Management System for the DMPA.

The present dumping site of Doomdooma town is located at the roadside of Doomdooma-Philobari road in the heart of Doomdooma town.



*Present dumping site of Doomdooma town*

Since the town generates a good amount of biodegradable solid waste besides plastic waste and malted wastes, so this plan proposes a scientific solid



waste management system and treatment plant at the back side of the present dumping site for maintaining safety and hygiene covering an area of area of 12 Bigha under Dag No. 731, 733 and 730, Doomdoooma town sheet Pt 1, 3 & 4.

Further, a few steps for scientific solid waste management system in master plan area includes segregation of bio-degradable and non-biodegradable solid waste at source, construction of compact pits at all residential houses in order to produce compost wherever feasible, introduction of specific litter bins for collection of segregated bio-biodegradable and non-biodegradable solid waste for soil conditioning and recycling purpose respectively, and doing away with the system of dust bins along roads which is a major cause of pollution.

**Manpower and Machineries available for SWM related works in Doomdoooma MB:**

a) Manpower	-	42 Nos.
b) Dumper	-	2 Nos.
c) Truck	-	1 No.
d) Auto Tripper Hydraulic	-	3 Nos.
e) General Auto Tripper	-	2 Nos.
f) Tractor	-	1 No.
g) Hand cart	-	3 Nos.
h) Tricycle	-	15 Nos.

The duties and responsibilities of ULB's as per revised Solid Waste Management rules of 2016 are given below:

- (i) The ULB's shall prepare a Solid Waste Management plan as per state policy within six (6) months.
- (ii) Arrange for door-to-door collection of segregated solid waste; integrate rag pickers/informal waste collectors in solid waste management.
- (iii) Frame bye-laws incorporating the provisions of these rules within one-year, prescribed user fee.
- (iv) Direct waste generators not to litter and to segregate the waste at source and handover does aggregated waste to authorized waste pickers, the waste collector authorized by the ULB.
- (v) Set up material recovery facilities or secondary storage facilities and provide easy access to waste pickers and recyclers for collection of segregated recyclable waste.
- (vi) Established waste deposition centre for domestic hazardous waste and ensure safe storage and transportation of the domestic hazardous waste to the hazardous waste disposal facility or as may be directed by the state pollution control board.

- (vii) Direct street sweepers not to burn tree leaves collected from street sweeping and store them separately and hand over to the waste collectors or agency authorized by ULB.
- (viii) Provide training on solid waste management to waste pickers and waste collectors.
- (ix) Promote setting up of decentralized compost plant or bio – meth nation plant at suitable locations in the markets or in the vicinity of markets ensuring hygienic conditions.
- (x) Collect separately waste from sweeping of streets, lanes and by-lanes daily or on alternate days or twice a week depending on the density of population, commercial activity and local situation.
- (xi) Involve communities in waste management and promotion of home composting, bio – gas generation, decentralized processing of waste at community level subject to control of odour and maintenance of hygienic conditions around the facilities.
- (xii) Educate workers including contract workers and supervisors for door to door collection of segregated waste and transporting the unmixed waste during primary and secondary transportation to processing or disposal facility.
- (xiii) Ensure that the operator of a facility provides personal protection equipment including uniform, fluorescent jacket, hand gloves, rain coats, appropriate foot wear and masks to all workers handling solid waste and the same are used by the work force.
- (xiv) Create public awareness on solid waste management.
- (xv) Convert the legacy waste using Bio- Mining Technology in existing dumping site.

#### **6.1.7 Electrical Sub –Station and Major Transformers**

Power requirement of Doomdooma master plan area is meeting by the APDCL grid. In 2011, there are 3513 electric connections i.e., almost 82.80 % in urban area and 4160 electric connections i.e., almost 49.20% in rural area. In the master plan area as a whole there are 7673 electric connections i.e., almost 60.41% in the year 2011. As information received from the concerned authority, at present almost 90% households have been electrified. Since the projected population of Doomdooma master plan will be 110993 (approx.), as such consumptions will be increasing at a fast rate due to increase of population as well as modernization of home appliances, it is necessary for the APDCL to make necessary arrangement of power supply to fulfill the consumption demand of the people.



*Electric sub-station of Doomdooma*

**Recommendation :-**

Plan recommends APDCL to establish a Power Grid station and conversion of overhead distribution network to underground network. This will change the living environment of master plan area.

**6.2 Social Infrastructure**

**6.2.1 Education facilities**

The progress and development of a place is closely related to expansion, development and modernization of education facilities. The educational atmosphere in Doomdooma is comparatively good. For school level education, high quality educational institution like Donbosco School, St. Mary's School, St. Francis School, Jawahar Navodaya, Hunlal



School, etc., for college level education Doomdooma College, Learner Junior College, Donbosco Junior College, etc. provides educational facilities not only to the students of Doomdooma but also the students to its adjoining areas as well

as nearby towns. Beside these school, there are so many L.P and High Schools, and many other private plays house school providing school education in Doomdooma.

Doomdooma College established in the year 1967 is a government provincialised college affiliated to Dibrugarh University. The college is a multi-faculty college with Arts, Commerce and Science streams. The college offers honours programme in Assamese, English, Economics, Education, History, Pol. Science, Commerce, Physics, Chemistry, Mathematics, Botany and Zoology. The college presently has an enrollment of 2813 students. Besides the various normal courses, the College also offers various Skill Enhancement Course like Desk Top Publishing & Photoshop, National Service Scheme, Vermi-Compost, Travel & Tourism Management, Entrepreneurship Development, Creative writing to the undergraduate students. The infrastructure of the college is quite satisfactory with more than 100000 sq. ft. built up area in a Myadi land of approximately 60 bighas.

During the decade 1970 to 1980 an English medium school was started in the church campus premises of Doomdooma was known as Don Bosco School which developed as a full- fledged higher secondary school later on.



*St. Mary's School, Doomdoooma**Kendriya Vidyalaya, Doomdoooma***TABLE No-33****List of Educational Institutions in Doomdoooma master plan area**

<b>LP Schools</b>			
1. Doomdoooma Ban giya LP	9. Fatikjan T.E. LP	16. Bissakupi T.E. LP	23. Ouguri LP
2. Moniram Dewan LP	10. Bishakupi Santi Nagar LP	17. Fatikjan Gaon LP	24. Daimukhiya New line LP
3. Ramthakur Vidyapith	11. 2 No. Athengia LP	18. Athengia LP	25. Hahsara 6 No. line LP
4. Doomdoooma Hindi LP	12. Badlabhet a T.E. Pachim LP	19. Mankhowa Tapob an LP	26. Daimukhiya T.E. LP
5. Shishu Vidyaman dir	13. Badlabhet a T.E. Pub LP	20. Mankhowa T.E. LP	27. Hahsara Church line LP
6. Bapuji Adarsha	14. Sakreting T.E. LP	21. Badlabheta Hindi LP	28. Hahsara T.E. LP
7. Doomdoooma Balak	15. Hahsara 18 No. line LP	22. Badlabheta <b>Appajay</b>	29. Hahsara 10 No. line LP
8. Doomdoooma Saraswati Balika			
<b>ME Schools</b>			
(a) Shishu Vidya Mandir ME	(b) Doomdoooma Hindi ME	(c) Bisakupi <b>Fatikjan</b> ME	

High School & Higher Secondary			
(i) Doomdooma Girls	(ii) Humilal HS	(iii) Kendriya Vidyalaya	(iv) Doomdooma Bangiya
(v) Doomdooma Adarsha Vidyapith	(vi) Ram Mohan Pathshala	(vii) Adarsha Hindi	(viii) Sankardeva Sishu Niketan
(ix) Dr. Rajendra Prasad	(x) Twinkling Star	(xi) Sishu Vidyamandir	(xii) Lotus Academy
(xiii) Jawahar Hindi	(xiv) Learner's HS	(xv) Jawahar Navodaya Vidyalaya	(xvi) Donbosco HS
(xvii) St. Francis			
College			
1) Doomdooma College	2) Doomdooma Junior College	3) Donbosco Junior College	4) Learner's Junior College

Source: - <http://schools.org/assam>

URDPFI Guideline for Education facilities

**TABLE NO-34****NORMS FOR PRE-PRIMARY NURSERY SCHOOL TO HIGHER EDUCATION**

Sl. No	Category	Student Strength	Population served per unit	Area Requirement	Other Controls
1	Pre-Primary Nursery School	-	2500	0.08 Ha	To be located near park
2	Primary School (Class I to V)	500	5000	Area per School = 0.40 Hec. A) School building area = 0.20 Hec. B) Play field area = 0.20 Hec.	Play field area with a minimum of 18 m X 36 m to be ensured on effective play.
3	Senior Secondary School (VI to XII)	1000	7500	Area per School = 1.80 Hec. A) School building area = 0.60 Hec. B) Play field area = 1.00 Hec. C) Parking area = 0.20 Hec.	Play field area with a minimum of 68 m X 126 m to be ensured on effective play.
4	Integrated School without hostel facility	1500	90000 To 1 Lakh	Area per School = 3.50 Hec. A) School building area = 0.70 Hec. B) Play field area = 2.50 Hec. C) Parking area = 0.30 Hec.	To be located near a sport facility



	(Class I to XII )				
5	Integrated School with hostel facility (Class I to XII)	1500	90000 to 1 Lakh	Area per School = 3.90 Hec. A) School building area = 0.70 Hec. B) Play field area = 2.50 Hec. C) Parking area = 0.30 Hec. D) Residential area = 0.40 Hec.	To be located near a sport facility
6	School for Physically Challenged	400	45000	Area per School = 0.70 Hec. A) School building area = 0.20Hec. B) Play field area = 0.30 Hec. C) Parking area = 0.20 Hec.	To be located near park or sport facilities
7	College	1000 To 1500	1.25 Lakhs	Area per School = 5.00 Hec. A) School building area = 1.80 Hec. B) Play field area = 2.50 Hec. C) Parking area = 0.30 Hec. D) Residential area = 0.30 Hec.	

From the survey it has been found that most of the educational institutions except Donbosco School, St. Mary's School, Hunlal Higher Secondary School, Girl's High School and Doomdooma College the area of the educational institutions is not sufficient as per **URDPFI** guidelines and there are no adequate play fields and parking facilities.

So, this plan suggests to take measures by the education department as well as private institution to increase the area of primary school up to 0.40 Hectare including playfield area, for Higher & Higher Secondary School up to 1.80 Hectare including playfield and parking area and for the intermediate school up to 3.50 hectare including playfield, parking facility and hostel facility as per URDPFI guideline.

This plan also suggests for the provision for school for physically challenged child / persons in an area of about 0.70 hectare for the enrolment capacity of 400 with adequate playfield and parking facility by the education department or by any NGO associated with social upliftment of the region.



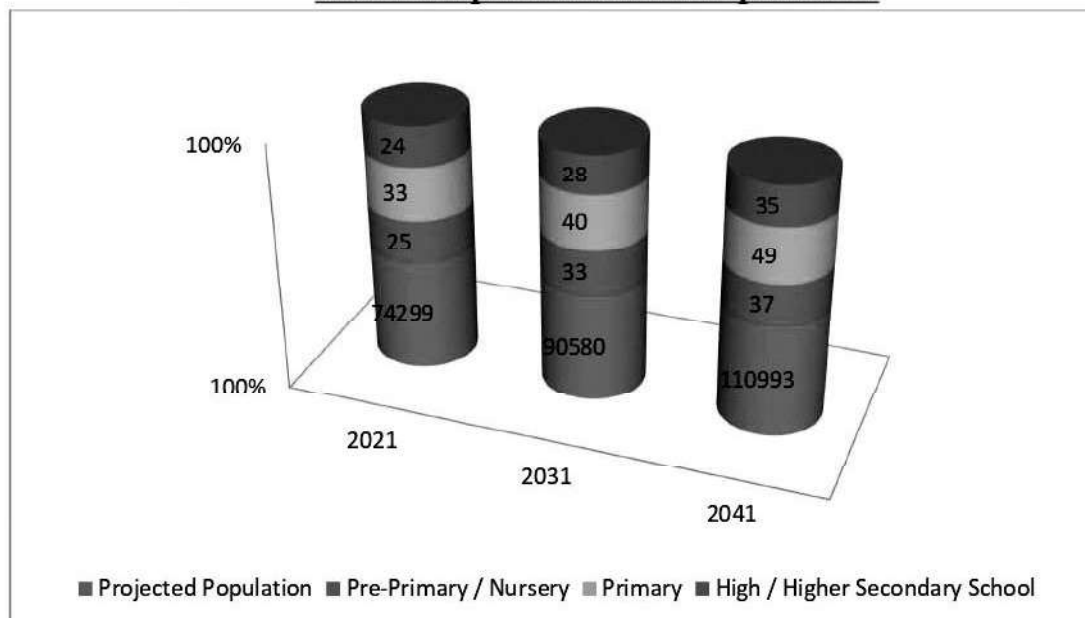
The following table shows the students strength and requirement of schools in Doomdooma Master Plan Area during 2021-2041.

**TABLE NO-35**  
**School required in DMPA up to 2041**

YEAR	PROJECTED POPULATION	Pre-primary /Nursery Student strength-	Gross Requirement of Pre-primary /Nursery Schools (120 students per school)	Primary Student strength-	Gross Requirement of Primary Schools (250 students per school)	High/Higher Secondary School/College Student strength-	Gross Requirement of High/Higher Secondary School/College (700 students per school)
2021	74299	2972	25	8173	33	16346	24
2031	90580	3943	33	9964	40	19927	28
2041	110993	4439	37	12209	49	24418	35

Source:- Calculated by T&CP, Dibrugarh

**FIGURE :-32**  
**School required in DMPA upto 2041**



Source: Estimated by Town & Country Planning, Assam, Dibrugarh

The shortage of schools in the plan area, to some extent has been fulfilled by the private institutions at present and it is also hope that in the future, private institutions will play an important role to mitigate the shortage of primary schools as well as High and Higher Secondary schools.

### **6.2.2 Health Care facilities**

Hospitals and healthcare services in the town of Doomdooma and its adjacent areas is satisfactory to some extent due to the existence to several tea garden hospitals. There are 1 Civil Hospital, 1 ESIC dispensary, 1 FRC hospital and 3 Primary Health Sub-Centre in Doomdooma Master Plan area. There are also 6 nos. of private nursing homes in the town and its adjoining villages that attend to the needs of the society. Most of the nursing homes have limited treatment facilities needed to support the people of the town and its adjoining village areas. Serious category patients generally rush to Assam Medical College, Dibrugarh situated at a distance of 74 Km from Doomdooma for better treatment.



*Doomdooma Civil Hospital*



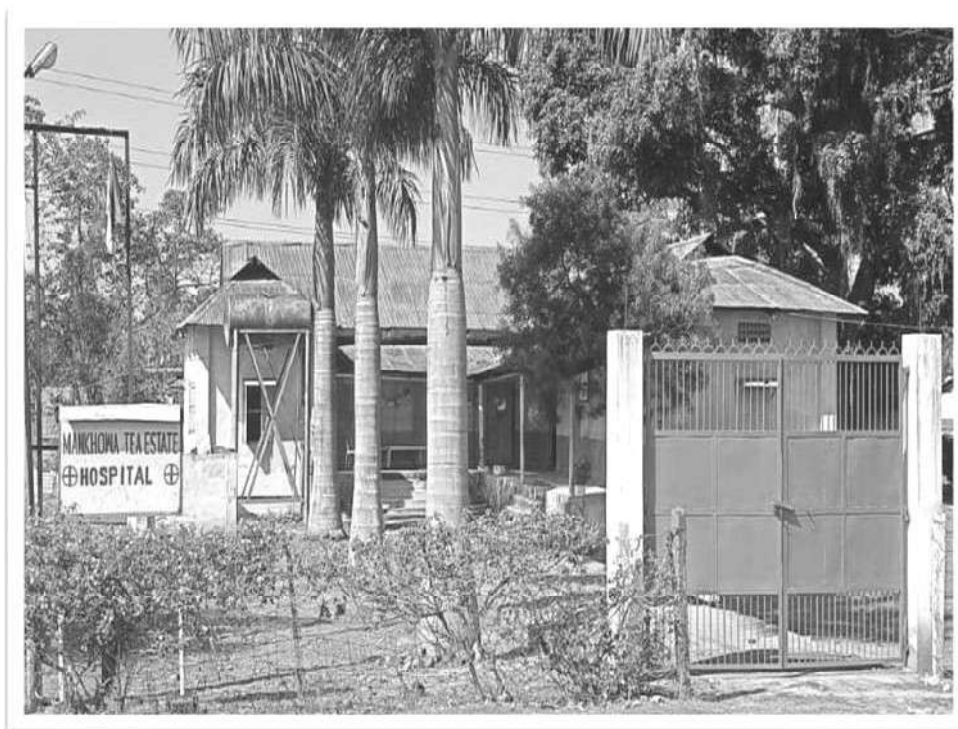
*ESIC dispensary Doomdooma*



*Doomdooma Polyclinic & Nursing Home*



*Doomdooma FRU Hospital*



*Mankhowa Tea Estate Hospital*

**TABLE No-36**  
**List of Health facilities in Doomdooma Master Plan area**

Sl.No.	Name of Health facilities
1	Doomdooma Civil Hospital
2	Doomdooma FRU (First Referral Unit)
3	Doomdooma ESIC
4	Bisakupi Tea Estate Hospital
5	Sokreting Tea Estate Hospital
6	Mankhowa Tea Estate Hospital
7	Longsowal Central Hospital
8	Badlabheta Tea Estate Hospital
9	Doomdooma Polyclinic & Nursing Home
10	Dr. Bora's Nursing Home & Maternity Home
11	Dr. Ojha's Nursing Home
12	Sarmah Nursing Home
13	Reliance Nursing Home

Source: - Data collected by T&CP, Dibrugarh

#### **URDPFI Guideline for Health Care Facilities**

In the health care facilities, the size of a hospital depends upon the hospital bed requirement, which in turns is a function of the size of the population it serves. As per URDPFI guideline the calculation of number of beds is based on: -

A) Annual rate of admission as 1 per 50 population

B) Average length of stay in a hospital as 5 days.

Since the projected population for Doomdooma master plan up to the year 2041 is 110993 as such, the number of beds required for the said population is:

- i) No. of beds days per year =  $(110993 \times 1/50) \times 5 = 11099$
- ii) No. of beds required with =  $11099 / 365 = 30$   
100% Occupancy

The classification of healthcare facilities as URDPFI guideline is given in the following table: -

**TABLE NO. - 37**  
**HEALTHCARE FACILITIES**

Sl. No.	Category	No. of Beds	Population served per	Area Requirement
1	Dispensary	-	15000	0.08 to 0.12 Ha
2	Nursing home, Child Welfare & Maternity	25 to 30 beds	45000 to 1.00 Lakhs	0.20 to 0.30 Ha
3	Polyclinic	Some observation bed	1.00 Lakhs	0.20 to 0.30 Ha
4	Intermediate Hospital	200 Initially the provision may be for 100 beds including maternity beds	1.00 Lakhs	Total Area = 3.7 Ha. i) Area for hospital = 2.70 Ha. ii) Area for Residential Accommodation = 1.00 Ha.
5	Family Welfare Centre	As per requirement	50,000	Total Area = 500 Sq.m to 800 Sq.m
6	Diagnostic Centre	As per requirement	50,000	Total Area = 500 Sq.m to 800 Sq.m
7	Rehabilitation Centre	-	-	As per requirement

This plan suggests to take appropriate measures by the health department for the provision of 5 nos. of dispensaries at various location within the master plan area covering an area of 0.08 – 0.12 hectare per dispensary serving at least 15,000 persons. This plan also asked the health department to upgrade the existing civil hospital with sufficient number of beds, all modern healthcare equipment for serving at least 1 (One) Lakh population and asked the authority concern to increase the hospital area for the hospital building as well as the area for residential accommodation of the hospital staff. This plan also suggests to set-up a family welfare center to serve at least 50000 persons by the health department and also a Re-habilitation center by the Govt. or by any NGO for the upliftment of deprived class of the community.

#### **6.2.3 Parks / Recreation Spaces & Cremation / Burial Ground**

The recreational facilities available in Doomdooa is not satisfactory. There is only 1 field i.e., Doomdooa stadium Field which provides the recreational facilities to the people of the town. Some educational institutions and tea gardens have their own fields for recreational activities viz. Doomdooa College Field, Doomdooa Girls Field, Donbosco Field, St. Mary's Field, Hahsara T.E. staff field, Doomdooa Golf Course at Raidang Tea Estate adjacent to the master plan boundary. Presently in Doomdooa, there is no Indoor games sports facilities and parks. As per information received from the concerned Authority initiatives have been taken for construction of Indoor Stadium and Swimming Pool at Doomdooa Stadium Field.

In Doomdooa Master Plan Area the existing land use for recreational purposes is only 27 hectares i.e. 0.46% of the master plan area or 1.76% of the total developed area. In this plan the proposed Land use for recreation purposes increase to 213 hectares i.e. 3.64% of the master plan area or 8.53% of the total developed area keeping in mind the increase of population up to the year 2041. This plan proposes 2 parks besides the Circle Office, at the existing dumping site, neighbourhood children park and recreational facilities along the Doomdooa river bank.



*Doomdooma Town Field/ Stadium*



*Doomdooma Girls School Field*



*Doomdooma College Field*



*Doomdooma Donbosco School Field*



*Doomdooma Golf Course adjacent  
to master plan boundary*



*Hahsara T. E. Staff Field*

Improvement of existing cremation and burial ground in proposed master plan.



**EXISTING CREMATION & BURIAL**

1. SHAMSHAN NEAR PHILOBARI ROAD
2. KABRASTHAN AT DOOMDOOMA TOWN 2<sup>ND</sup> PART
3. Every villages & tea gardens has its own cremation ground



**CHAPTER - 7****7. ENVIRONMENT, TOURISM AND CITY BEAUTIFICATION PLAN****7.1 Description of eco-friendly areas –**

There are many eco-friendly/heritage sites in Doomdooma which became the pride of Doomdooma.

**7.2 Plan / Measures for protection and conservation of environmentally-friendly zones.**

Being environmentally friendly simply means having a lifestyle that is better for the environment. It's all about taking small steps towards mother earth so as to make this planet a better place for our communities and generations to come. A good way would be to start with conserving water, driving less, walking more, consuming less energy, buying recycled products, eating locally grown vegetables, joining environmental groups to combat air pollution, producing less waste, planting more trees and many more. The more that we do on our part the faster we will create an environment of living that promotes sustainability.

In the environmentally friendly zone, there is more than just a good recycling programmed in place. People of the town who are committed to conservation and preservation of resources should encourage options like community play grounds, public transportation, green construction and work to change the way that fossil fuels and other resources are used to support community services.

This plan suggests following proposals for protection and conservation of environmentally friendly zones-

- (i) People of Doomdooma urban area should join hand with environmental groups to protect the town and make the environment clean and green.
- (ii) Reduce, reuse, recycle waste hierarchy is the order of priority of actions to be taken to reduce the amount of waste generated and to improve overall waste management processes and programs.
- (iii) Plantation habit should be grown up among the people. For this necessary awareness camp should be organized by competent authority for conservation of natural resources and composting system.
- (iv) Steps should be taken by the authority to stop people from littering on roads. Instead, educate them to put trash and garbage in dustbins. The pile of garbage on road hampers the beauty of the city and also pollutes the air.



- (v) Steps should be taken by the concerned authority to reduce the emitted hazardous chemical and gases in industrial activities.



Plantation habit



Reduce, reuse, recycle waste

### 7.3 City Beautification Plan/ Proposals-

To improve town's appearance and aesthetic view, neighbour hoods often try to update what is known as streetscape, which pertains to the area between the driving lanes and the edge of the private property. Partly this is a popular strategy because it is public space and it's easy for the government to dictate what will happen there. In truth, streetscape can be quite effective in uniting block faces or a series of blocks that are discordant in some way, because streetscape often includes plantings, the effect is to soften the view created by streets and hopefully sidewalks. Care in the choice of materials and in the quality of the installation makes all the difference in this form of beautification.

In addition to streetscape, sometimes we need a focal point. This might be public art and open-air theatre, fountains, a clock tower or grouping of tall grasses. If we already have a lonely statue or old historical building with nothing around it, maybe we should add planting beds of considerable size, an inviting bench or two, and may be an interpretive sign explaining the rest of the store". A tree planting project, either on a vacant plot, in a park, or in the parkway between the side walk and the street is great for improving Towns appearance over the course of a few years at a relatively low cost. Voluntary schemes should be taken up by neighbourhood



basis for cleaning up the park of the town. Project should also be taken up for cleaning the river or stream.

#### **7.4 Roadside Plantation-**

The main object of road side plantation is to provide protection to road, traffic, check soil erosion, food, fuel, fodder and timber to the society and mitigate climate change issues. Plantation is durable assets that produce fruits and raw-materials for agro based industry, and also generate livelihood after 7to 10 years.

This plan suggests the social forestry department to prepare project on road side plantation with details of road to be covered, length of road and species of plants to be planned with numbers of plants for entire Doomdooma master plan area.

Plantation of fruit bearing plants, suitable to local agro-climatic condition should be done in every area of the master plan. The authority concern should take steps for organizing camp and awareness program for road side plantation and educate the people about the benefits of road side plantation including its impact on city's landscape.



#### **7.5 Urban Agriculture and Urban forestry.**

Urban Agriculture is the new culture that is catching up in emerging cities. Since the population growth rate is very high, natural resource to feed the increasing population in coming days is going to be a difficult task. So, urban agriculture is seen as a big solution to the problem.

Urban forestry is the careful care and management of tree in urban settings for the purpose of improving the urban environment. Urban forestry advocates the role of trees as a critical part of the urban infrastructure. Urban forest function is thus often oriented toward human outcomes, Such as shade, beauty and privacy. Urban forests bring many environmental and economic benefits to town. Among these are energy benefits in the form of reduced air

conditioning, reduced heating by shading buildings, homes and roads, absorbing sunlight, reducing ultraviolet light, cooling the air and reducing wind speed.

So, urban forestry scheme should be taken by competent authority for afforesting degraded forest land in the Doomdooa master plan area. This type of scheme will act against climate change by creating a carbon sink and against air pollution in the town. This plan also suggests for starting tree surveys in the town which can be conducted by NGO and college or school students. A plan should be framed to create small nurseries in Govt. school as well as in private institution where there is extra space.



## 7.6 Public Rain Water Harvesting Scheme

Rainwater harvesting is a process involving collection and storage of rain water that runs off natural or man-made catchment areas, e.g., roof top, Compounds, rock surface or hill slopes or artificial repaired impervious/semi-pervious land surface.

Due to deforestation and the consequent ecological imbalance, the ground water level is going down day by day. The constant rising demand of water supply especially from the urban areas does not match with the surface water sources, as a result of which the water reserves beneath the ground



level are over exploited. This consequently results in the water level depletion.

Water harvesting apart from recharging the ground water level, increases the availability of water at a given place at a given point of time. It also reduces the power consumption. It further reduces the run off which chokes the storm water drains, artificial flooding, chances of soil erosion and improves the quality of water. The plan suggests rain water harvesting scheme to be implement by a competent authority. Moreover, the urbanization trend reduces the infiltration rate of rain water into the sub-soil there by reduces ground water recharging.

#### **7.6.1 Development of Parks and Recreation Spaces-**

The Plan recommends 213 hectares of land for recreational purposes. The plan envisages a Town hall, a Auditorium, a Library and a Park at existing dumping site to meet the social and cultural needs of the town and also recommends modernizing the existing play ground with adequate infrastructure. The plan also proposes an indoor stadium and a swimming pool at Doomdooma Stadium, a children park near Circle Office and small size children park at each neighbourhood area and in composite zones.

#### **URDPFI Guideline for Parks and Recreation Spaces**

The provision of socio- cultural facilities shall correspond to the changing urban demography and work life style.

**TABLE NO-38**  
**NORMS FOR SOCIO- CULTURAL FACILITIES**

<b>Sl.No</b>	<b>Category</b>	<b>Population Served per unit</b>	<b>Land Area Requirement (Sq.m)</b>
1	Aganwadi- Housing area / Cluster	5000	200-300
2	Community Room	5000	750
3	Community hall / Marriage Hall/ Library	15000	2000
4	Music, dance and drama centre	1 Lakh	1000